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Volume XLVI

JULY, 1924

Number Six

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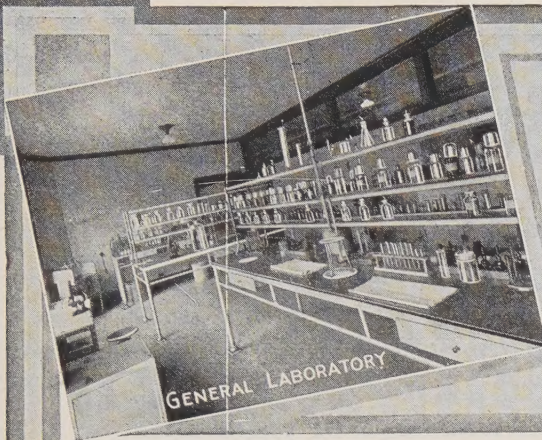
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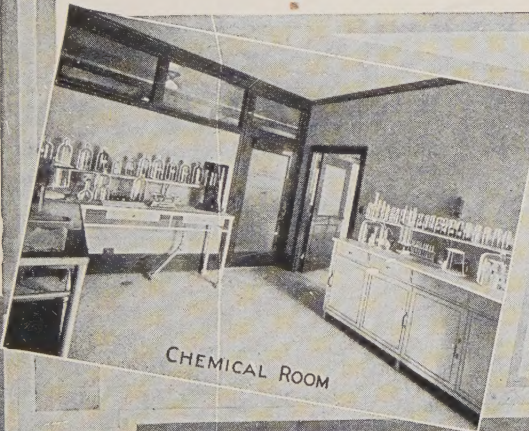
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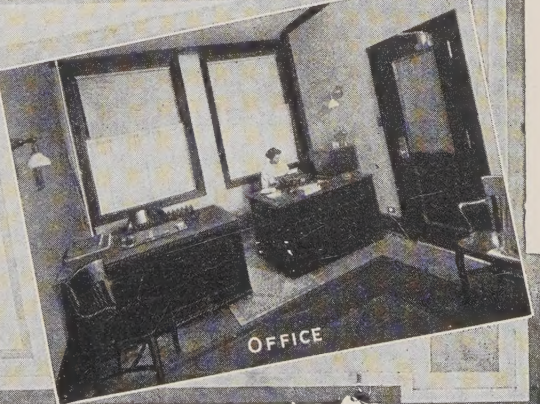
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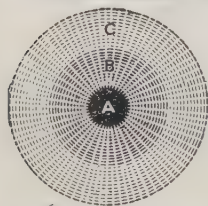
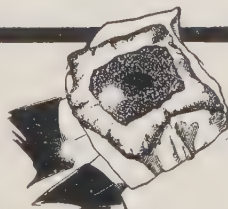


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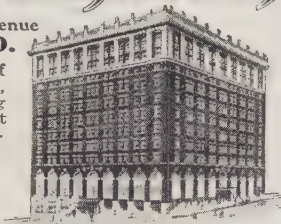
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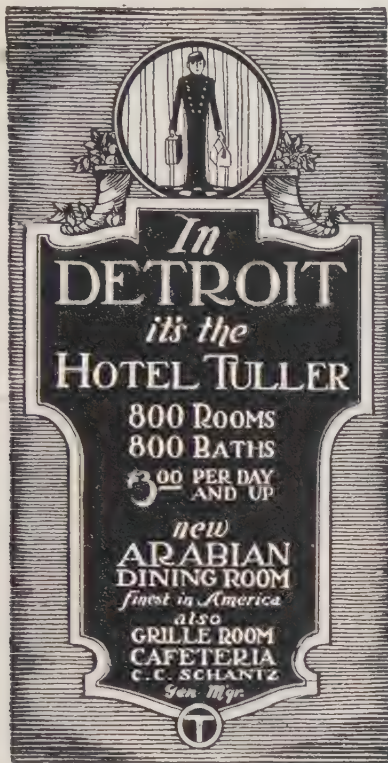
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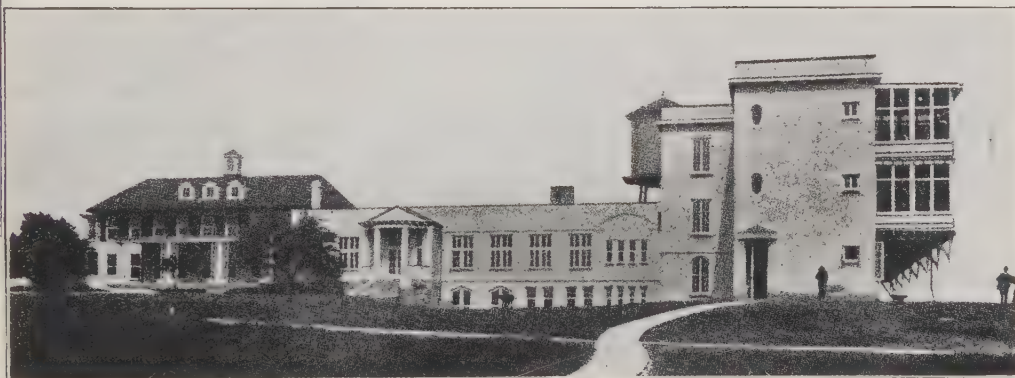
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BILE TRACT INFECTION

By F. F. LAWRENCE, M. D., D. Sc., LL.D., F. A. C. S., Columbus, Ohio

Mr. President and Members of the Association: I do not like the use of the term gall-bladder infections when discussing a subject which I believe to be much more extensive, and in which I believe the gall-bladder to be the secondary focus of infection rather than primary. If I should seem a little arbitrary, remember that what I am offering you is the result of thirty-seven and a half years of active work in gall-bladder surgery; that these cases have been personally studied, personally prepared, and personally cared for.

I cannot believe that the theory which has lately been enunciated that these infections are all hematogenous, can be true. If the infection of the bile tract comes from the blood stream, it means we must have a bacteriemia prior to the infection of the bile tract, because the latter is a local infection and could not come from the blood stream except as a bacteriemia. A bacteriemia means two things. First, acute infection: and an acute infection of the bile tract is rare. Second, it means septicemia of the progressive type as described by Nicholas Senn many years ago. The bacteria in the blood multiply in increasing numbers and produce their toxins in the blood. Septicemia in bile tract or gall-bladder infections is one of the rarest things we ever see. If it were due to pus being carried in, the blood stream, it goes without saying that we would have pyemia and frequently hepatic abscesses which are rare except in the neglected or badly managed cases.

The question arises, how comes the infection? Reference to the anatomy of the abdomen with especial reference to the lymphatic system may help us. I want to direct your attention to the point that bile tract infections occur as a sequel almost always (if not entirely) to some infection below the umbilicus or in the lower part of the abdomen, in typhoid,

appendicitis, or from pelvic infection. In the second place, why is it that bile tract infections occur in women in the proportion of 5 to 1 in men? My own experience has been that the proportion is almost 7 to 1. These are pertinent questions.

I want you to look at this schematic diagram for a moment. This is the portal vein (illustrating) made up of the inferior and superior mesenteric and the gastric and splenic veins. The inferior and superior mesenteric take up the blood from the pelvis and almost the entire intestinal tract. Why is it we do not have splenic involvement in our bile tract infections until comparatively late? They are never primary.

Below here (illustrating) the lymphatics come along in close relationship with the mesenteric vessels. As they come up they become incorporated in the wall of the portal vein. The lymphatics accompany the mesenteric vessels lying in close relationship with a rich lymphatic supply which is embedded in the wall of the portal vein.

If the infection were as the infection in typhoid fever, a glandular infection, it is logical for us to conclude that it is always lymphatic and not traveling along the blood stream.

About the postpancreatic region we find the lymphatic glands numerous. They come along up and follow in close proximity to the vena cava; they do not come over with the portal vein, and one of the reasons we do not have bile tract infections occurring more frequently in stomach conditions is because gastric ulcer is comparatively uncommon, and because the lymphatics enter above into the thoracic duct without coming up through the portal circulation. All of these lymph vessels accompany the portal system, and as they come up with the portal vein, they enter into the hilus of the liver accompanying the portal vein and hepatic artery, and they pass through with the portal vein along with the interlobular vein, passing through the capillary network into the sublobular, the lymphatics coming along with the branches in the substance of the liver. The source of primary infection in my judgment is in the smaller excretory ducts of the liver substance.

Here is another thought that has occurred to my mind: why is it in such a large proportion of cases, particularly in prolonged old cases, the bile is sterile, so far as the production of peritonitis is concerned, if you should happen to spill it? If we were having a frank mucosal infection there, the colon bacilli would be active, and there might be peritonitis following.

The laboratory findings should support the clinical picture. When the laboratory findings are contrary to the clinical, the clinical is the safer to follow. So much for the pathology. There is much more that could be said, but this is sufficient for you to get the idea.

So far as the production of symptoms is concerned, we have a definite sequence of clinical symptoms. I wonder sometimes whether the

members of the profession at large fully realize when they go to the bedside that the sympathetic nervous system of the human being is one of the most gigantic and most important systems of the entire body—a system which controls secretion, excretion, heart action, respiration, and largely the blood vessels, yet it is forgotten in an attempt to make a diagnosis, and too much reliance is placed on the laboratory findings through the microscope.

Why do we have the sequence of symptoms in the gall-bladder colic? When you have hepatic colic the pain and vomiting come together. The opposite of both renal colic on the right side and appendicitis. In appendicitis the pain may persist for a long time. In connection with the kidney gastrointestinal disturbance may precede, for hours, the colic.

The sympathetic nerves supplying the duodenum and pyloric end of the stomach come directly from the solar plexus. When there is irritation of the cystic branch which comes off at the same point with slight deviation, the irritation of any one of these three divisions, duodenal, gastric, or the one which supplies the cystic duct, a telegraphic message comes at once and you get your reverse peristalsis and vomiting coming on synchronously, whereas the cecum, appendix and lower bowel are supplied by the lumbar plexus and the sequence is different. If we keep in mind the two sympathetic ganglia in the wall of the intestine, controlling peristalsis secretion and excretion, we can understand why we have hyperacidity in these bile tract infections, the infection being subacute and chronic in the great majority of cases, the irritation continuing but is not severe enough to produce paralysis. Irritation of the nerve trunks increases its activity. If we keep these things in mind, it is not hard for us to understand only that hyperacidity is a common thing. Every surgeon knows that a large majority of the cases of bile tract infections that come to the surgeon have been treated for God knows how long, for dyspepsia, indigestion, and a few other things, so that I want to drive home this point more than anything else, and that is, we must not forget the importance of our sympathetic system as a causative factor in the sequence of symptoms.

As to the treatment, I firmly believe that the successful treatment of bile tract infections must embody three elements. It must be dietetic, it must be therapeutic, and it must be surgical. Without any one of the three we are doomed to disappointment and failure in the great majority of cases. The treatment must be dietetic in order that we may obviate fermentation and the constant irritation which comes from stuffing people with starches they cannot take care of. The treatment must be therapeutic. If you keep in mind the distribution and how the infection extends in the bile tract, we must produce increased activity of the liver cells, increasing the secretion of normal bile to wash out the infection. The treatment must be surgical because we must drain the swamp, so to speak.

What type of surgery shall it be? Shall it be a cholecystostomy or a

cholecystectomy? What in the name of heaven can I expect to do in the way of draining out the bile tract if I remove the gall-bladder? If it will not drain through the common duct with gall-bladder present, and it will not as every man knows who has operated on these cases. There are two things to remember: the cystic duct has a thickened caliber, and the postcystic lymphatic glands are always enlarged in old cases, occluding in a large measure and sometimes entirely the common duct. If we must keep the gall-bladder for drainage, what do we do if we stuff it full of gauze or stick in a rubber tube which does not drain lymph; it does not drain the inspissated thickened bile. We must have drainage which drains if the infection extends back into the substance of the liver in its remotest parts, and I do not know that I have ever seen a single case in which the liver was not very much enlarged. Why is it enlarged? Because the infection is scattered all through it. How are we going to drain it out if we place a tube in the gall-bladder and apply no form of suction or vacuum force? Then the thing to do is to safely anchor the gall-bladder, put in a large enough tube to drain, and then drain by using a suction pump and pump it frequently until you have gotten rid of every vestige of infection as indicated by mucus or bacteria.

There are cases, however, in which cholecystectomy must be done. What are they? In the gangrenous gall-bladder, of which fortunately there are not many, and in the perforated or ruptured gall-bladder, which fortunately also is a condition not found in a large number of cases. Again, in the small contracted gall-bladder, in which the cystic duct is entirely obliterated and remains as a fibrous cord. Here the gall-bladder is an organ that has no function and it cannot drain if you use it because the cystic duct is obstructed. In these cases, however, instead of classical cholecystectomy, I believe it to be better to split the peritoneum over the end of the gall-bladder and enucleate the muscular and mucous portions of the gall-bladder, leaving the peritoneal coat with the blood vessels underneath the peritoneum. This is an almost bloodless operation and can be done without any difficulty or complication of any kind. There is no danger of injuring the important structures in ligating the pedicle.

In cancer of the gall-bladder as a primary malignancy, there is the possibility that the removal of the gall-bladder may be really beneficial. I question very much whether such a condition ever obtains, whether we ever find absolutely primary carcinoma of the gall-bladder. I do not say we do not, but I question it. I have seen a great many gall-bladder cases, and I have never seen one of primary carcinoma of the gall-bladder. If it were primary, considering the close lymphatic supply and close relation with important vessels, it is a question or not whether we should do cholecystectomy, and whether or not such cases should not be referred to the radiologist for deep x-ray therapy. I have some doubt whether by surgical

intervention we can do as much for these cases as the radiologist with deep x-ray therapy.

As I mentioned a moment ago the therapeutic treatment must be such as to increase the activity of the liver cells and to cause an increased secretion of normal bile. One drug may accomplish this more than any other. I do not know, but my own belief is that the greatest stimulator of liver function we have is ipecac in small doses, together with the taurocholate of soda to get the liver cells into normal action and get the vascular system unloaded. Sweets and starches should be absolutely precluded until the drainage fluid is absolutely clear from evidences of infection. The great trouble about drainage in these cases is that in many instances it is too short. Drainage for a few days is worthless. I drain these cases as long as three months. I rarely ever see a case in which I think the drainage tube can be safely removed in five or six weeks, but the majority of cases will go longer before the bile is clear and it is safe to close the drainage tract, and the diet should never contain starches or fat until drainage can be entirely stopped.

With the three things I have mentioned—diet, therapeutics, and operative work—properly combined, there is no surgery under this side of heaven that is more delightful in results than surgery of the gall-bladder. Leaving either one out I know of nothing more disappointing.

CHOLECYSTITIS ASSOCIATED WITH CARDIO-VASCULAR DISEASE

By J. LOUIS RANSOHOFF, M. D., Cincinnati, Ohio

The association of inflammation of the gall-bladder and bile ducts with cardio-vascular disease forms a symptom complex which occurs with sufficient frequency to demand serious consideration. This is particularly true since this combination usually constitutes what has come to be known as a desperate risk case, the successful outcome of which demands the most meticulous weighing of evidence and the utmost nicety of surgical and medical judgment. In order to study these cases intelligently, it seems advisable to divide them into three classes:

First, gall-bladder dyspepsia, simulating cardiac disease.

Second, gall-bladder disease associated with valvular heart disease.

Third, myocardial degeneration, due to or associated with infections of the gall-bladder.

The association of chronic cholecystitis with cardiac irritability, pre-sternal distress, palpitation and irregularity is too frequent to demand more than a passing word. In fact, as Babcock (1) has pointed out, there are many individuals who complain of disease of the heart, when the source of the distress is some subdiaphragmatic lesion, usually of the gall-bladder or less frequently of the appendix or stomach. Why these subdiaphragmatic lesions should simulate cardiac disease is difficult to

determine. In all probability it is due to irritation of the terminal filaments of the vagus nerve, with reflex cardiac disturbance. These cardiac neuroses, as they are frequently called, may vary in intensity from a sense of precordial heaviness to attacks closely simulating angina pectoris. A careful clinical examination will rarely fail to establish the correct diagnosis. The operative correction of the pathologic lesion results in the almost immediate disappearance of the cardiac symptoms.

Class 2. The association of gall-bladder disease with true valvular disease of the heart is of far more importance. The presence of a compensated valvular lesion of the heart is no contra-indication to operations on the gall-bladder, provided the anesthetic is well chosen, and still more important the anesthetist. Here the entire indication should be the gall-bladder disease and the decision as to operation should not be influenced by the presence of a compensated heart lesion. It is, however, the association of gall-stones with decompensated heart lesions which particularly interests us.

The first requisite of the recovery of a damaged heart is absolute rest. If this rest is broken by constantly recurring attacks of gall-stone colic, the recovery of the damaged heart is made difficult, if not impossible. In addition, the absorption of toxic products from an infected gall-bladder further devitalizes the already damaged myocardium. The decision of whether and when to operate demands the utmost co-operation between the surgeon and the internist.

If it is evident that attacks of gall-stone colic are sufficiently severe to hamper the recovery of compensation, then operation is imperative. It must be remembered, however, that the indication for operation is the gall-stones and not the cardiac condition. That is the presence of comparatively quiescent gall-stones found in the course of a clinical examination should not constitute an indication for operation in the hope that by some magic the cardiac decompensation may be relieved. In this class of cases, it is almost axiomatic that the more severe the inflammation of the gall-bladder, the more pronounced will be the cardiac improvement following operation.

Before operation these patients should, of course, be brought to the highest possible state of efficiency without undue delay. The pain should have been relieved for several days by the use of morphia and large amounts of water introduced into the system, either by mouth or the subcutaneous route. The operation should be done under local anesthesia, or if this is impossible because of the nervous excitability of the patient, a combination of local and light gas anesthesia should be used. It is evident that the operation chosen should be the simplest one to relieve the immediate symptoms. That is, cholecystotomy should be done, the stones removed and the gall-bladder drained. Any attempt at cholecystectomy is absolutely contra-indicated, in fact, even in the presence of common duct stone with jaundice, it may be wise in this class of cases to drain the gall-

bladder or common duct leaving the stone to be removed at some subsequent operation, after the recovery of the heart.

Case: Miss M. A., aet. 49, admitted to the Jewish Hospital, May 2, 1923. Complains of shortness of breath. The first symptoms of this kind began about a year ago, when she had swollen feet, shortness of breath, precordial pain. At that time the diagnosis of heart lesion was made, she was kept in bed for ten weeks. Since then she has led the life of an invalid, unable to climb stairs without severe dyspnoea, unable to do any but the lightest work, and compelled to rest frequently.

Examination shows a rather corpulent woman, feet swollen, eye lids puffy. Blood pressure 158/100. The heart measures $10\frac{1}{2}$ cm. in the 5th interspace. The first sound is entirely replaced by a systolic murmur, transmitted to the left scapula. Electrocardiographic tracings show enlarged left heart irregularity and some auricular fibrillation. Abdominal examination reveals marked rigidity and tenderness over gall bladder region. Slight fever every night. The patient has nightly attacks of gall-stone colic, very severe in nature, which require morphia for their relief. Wassermann negative. After consulting with the medical and cardiovascular services, it was decided that there was no possibility of a restoration of the heart until the gall-bladder condition was relieved.

After a week's rest and digitalization, slight improvement was noted in the heart. The pulse became more regular and reduced from 100 to 80. May 23, 1923, under local anesthesia, the gall-bladder was exposed through a right rectus incision, a cholecystotomy made and three large stones removed. After operation there were few untoward symptoms, the pulse did not rise above 100, the shortness of breath was relieved and the precordial pains were absent. Discharged June 12, 1923, three weeks after operation, with wound closed. Re-examination September 15, 1923, the patient says she has been in better health than at any time in the past two years. The heart is regular, the pulse full and 90 B. P. 140/100. For the past six weeks without any evidence of distress she has resumed her occupation, that of house work. She is enabled to cook and do her other regular duties.

Case 2. Mrs. M., aet. 58, complains of heart disease. She has been treated for the past two years for cardiac disease by her physician. During this time she had recurrent attacks of angina, with shortness of breath and at times puffiness of the feet. Several times during the past two years she has been confined to her bed. There have never been any febrile attacks, or anything pointing to abdominal inflammation. December 13, 1920, an attack similar to the ones which she has been having was ushered in by a severe pain in the abdomen, followed by fever and chills. Present examination, December 18, 1920, fairly large corpulent woman, blood pressure 134/82, temperature ranging from 101 to 102 degrees. Pulse rapid. Cardiovascular examination shows a systolic murmur at the apex, transmitted to the left scapula. Precordial dullness enlarged to 8 cm. at the

manubrium. Examination of the abdomen discloses marked tenderness over the gall-bladder region with rigidity of the right rectus muscle. Examination otherwise negative. Diagnosis was made here of an acute cholecystitis with co-existing mitral lesion and decompensation. December 20, 1920, under a combination of local and light gas anesthesia, the abdomen was opened and a large abscess cavity found leading into the gall-bladder. Here there was one stone the size of a small peach. The stone was removed and the gall-bladder drained. Rather stormy convalescence, followed by complete recovery. Patient was dismissed from the hospital, January 30, 1921. At the present time the patient is in perfect health, has no more attacks of cardiac disease and is able to do heavy housework, including washing.

The above cases were properly selected for operation. That is, the operation was done for the gall-bladder condition in spite of the associated cardio-vascular complications, and good results were obtained.

Case No. 3 presents quite a different picture:

Mrs. F. S., aet. 65, admitted to the Jewish Hospital, October 9, 1922. For the past five years has had frequent attacks of dizziness and shortness of breath, particularly after exertion. During the summer was frequently obliged to sleep in an orthopneic posture. Her present illness began three weeks ago with what seemed to be an attack of acute indigestion. During the following week she had a severe convulsion ushered in by dyspnoea and precordial pain. These attacks have recurred from three to four times, and have lasted from five to ten minutes. Most of the attacks were accompanied by loss of consciousness. During the past three weeks she has had continuous nausea, being able to retain but little food.

Examination discloses rather corpulent woman, very pale, no icterus. She complains of a sense of precordial fullness and some abdominal pain. Cardiovascular examination shows heart enlarged, systolic murmur transmitted to the base, pulse extremely irregular, varying from 100 to 140, with frequent skip beats. Blood pressure 150/100. No electrocardiogram was taken. Abdominal examination revealed slight tenderness over the gall-bladder region, no enlargement can be felt. X-ray examination of the gall-bladder discloses the presence of stones. Wassermann negative. Urine contains a large quantity of albumin. The patient was put on a water subcutaneously and digitalis. Under this treatment there was no improvement. In the hope that the removal of the gall-stones would improve the cardiac condition, operation was decided on. Under local anesthesia, the gall-bladder was drained. Several stones were removed, but there was no evidence of either acute or chronic inflammation of the gall-bladder. The liver showed definite evidence of passive congestion. The operation was without incident and seemed to have no deleterious effect on the general condition. Death, however, occurred twenty-six hours after operation from acute cardiac dilatation.

This case, in my opinion, was incorrectly chosen for operation. In other words, the attacks of dyspnoea which accompanied the convulsive seizures seemed in retrospect, entirely unconnected with the gall-bladder lesion. In these cases it is almost a *sine qua non* that the more severe the gall-bladder lesion the more prompt the relief. In this case the gall-bladder was comparatively uninflamed, and the stones seemed entirely quiescent. On the other hand, the liver was enlarged, evidently the result of hypostasis. Of course, before operation it is exceedingly difficult to determine on the course of treatment, but with cases of this kind in mind, it will be easier to choose those suitable for operation. It must always be remembered that the progressive congestion of the liver may cause signs not unlike acute and chronic cholecystitis.

Case 4 belongs to the class of acute infections of the gall-bladder, accompanied by myocardial degeneration.

Mrs. B., aet. 62, chief complaint severe pain in right side, transmitted to the shoulder. For the past two years has had intermittent pains in the abdomen. She has had two attacks of influenza. Admitted to the Jewish Hospital, November 26, 1920. Thirty-three years ago had slight attack of abdominal pain, which at that time was diagnosticated as gall-stones. These have been almost quiescent up to the present illness. In September, had an attack of influenza and bronchitis, from which she has not recovered. In October there was a sudden collapse with syncope, since which time she has been in bed. There has been no fever, no chills and no evidence of abdominal discomfort. The diagnosis has been myocarditis. A week before admission she first experienced excruciating pain in the abdomen. At that time the diagnosis of acute cholecystitis was made and operation discussed. However, the patient's condition seemed too extreme to permit of surgical procedure. However, under observation the abdominal condition gradually grew more severe, with chills and high fever, evidently pointing to a suppurative cholecystitis. The patient was admitted almost in a state of collapse. There was marked tenderness and rigidity over the gall-bladder region. The tongue was furred. Respiration 28, pulse 100.

Electrocardiograph tracings show an irregular irregularity, with a rate varying around 100. The auricular waves are absent, fibrillations taking their places. There is a systolic murmur at the base and apex. Diagnosis: Cardiac irregularity, left cardiac hypertrophy.

In spite of the desperate condition of the patient, it was thought impossible for the heart to recover in the presence of this severe infection of the gall-bladder. Under a combination of local and general anesthesia, the abdomen was opened through a transverse incision. After separating the adhesions, the gall-bladder was found distended with white bile and pus, behind a large stone in the cystic duct. The stone was removed and the gall-bladder drained. The patient reacted from the operation, but that night had a desperate attack of auricular fibrillation, in which the

pulse was uncountable. This responded well to digifoline. After a stormy convalescence the patient recovered and was discharged December 27, four weeks after operation.

This case shows that a desperate chance may occasionally prove successful in the presence of a severe lesion of the gall-bladder. This patient has never regained her full health, as her heart is, of course, still damaged. She is, however, able to fairly enjoy her life.

These cases suffice to demonstrate the following conclusions:

First: Cholecystitis complicating cardiac decompensation seriously hampers recovery of the damaged heart.

Second: The more severe the gall-bladder lesion the more pronounced will be the beneficial effect of operation.

Third: The operation chosen should be the simplest one to relieve the immediate pathologic condition. Cholecystectomy is rarely, if ever indicated.

Fourth: The indication for operation must be the severity of the gall-bladder condition.

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DISCUSSION

DR. ROBERT H. BABCOCK, Chicago, was asked to open the discussion on these two papers. He said: I have nothing but words of commendation for these two papers because they coincide with views which I have entertained for a goodly number of years, and views which I promulgated in 1909 in a paper read before the Association of American Physicians. I believe the evil effect of gall-bladder disease upon the heart is not only toxic in some cases but influences it through the parasympathetic or vagus nerve. I have seen a goodly number of cases which illustrate that, and cases which under operation have verified the conclusion that the cardiac disorder was secondary to a chronic or acute cholecystitis.

I wish particularly to emphasize what Dr. Ransohoff has just stated, that the operation must be a conservative one. I do not believe at all in surgeons emptying the abdomen in the presence of a cardiac abnormality and cleaning up all the pathology there is within that abdomen, and making from the standpoint of the surgeon a beautiful operation. The surgeon should commit as little surgical trauma as possible, and clean up only the pathology which is responsible for the cardiac disorder. In other words, I am not afraid of the operation but I am mighty afraid of the operator. I have seen cases that illustrate this and which out of the large number of cases of cardiac disease associated with gall-bladder disease have been the ones that died. Two died years ago as a result of gas anesthesia; they died of acapnia and respiratory failure. Two have died within the last two years as a result of the surgical operation itself without any question. In one the subsequent history with the postmortem examination verified this, and the other case verified the conclusion that had the operator been conservative, the heart would have stood the operation. One patient went on for several months before death occurred

as a late result of the surgical interference, and the other after having gone through the operation went into collapse and died on the fifth day.

In illustration of the effect of gall-bladder disease upon the heart I will recite one case. Something like a year ago I saw a man who had been treated for several months for heart block which was easy to determine by the ordinary clinical examination and was verified by electrocardiograms. I wish to say right here that in these cases the physician should go most carefully into the history and symptomatology before he comes to a definite conclusion. In going into the history of that man's case it was quite evident he had suffered from attacks of gall-bladder disturbance, although I do not think he had any attacks of actual hepatic colic. He had been treated for several months for mucous colitis. When the man came back to my office after the electrocardiogram was sent, I considered this heart block of vagal origin. We gave him a hypodermic of 1/50th grain of atropin. After 30 minutes his pulse was 72 and as regular as a clock. I do not know the subsequent history of that case because he shied off from the treatment of the gall-bladder. He was dominated by the idea that his trouble was mucous colitis. Had that man's gall-bladder been operated in a conservative fashion, he would have recovered from his heart block because it was purely vagal. That the heart may seriously suffer is amply proven, for Osler said in 1909 he thought I was perfectly right in my conclusion because he had seen a patient die from acute cardiac dilatation during an attack of gall-stone colic. Allbutt says that same thing in his excellent work on angina pectoris.

With reference to the operation itself, I am a thorough believer in prolonged drainage of the gall-bladder except in those exceptional cases in which the state of the gall-bladder is such as to require its removal. I say prolonged drainage because, as pointed out by Dr. Lawrence, there is in these cases always infection of the hepatic ducts, and if you simply drain for a few days or a week and drop the gall-bladder back into the abdomen and close the wound, you have not drained the liver itself. In my own case when I had gall-stones removed drainage was established through a tube for four or more weeks; then I drained through the wound for another six weeks, altogether nearly three months. I have never had a symptom of recurrence since. When my appendix was removed three years ago the gall-bladder was found small and looked normal and suspended by a single ligature, which was cut.

If the gall-bladder is removed there is in most cases more shock, it seems to me, than from the simple opening of the gall-bladder and drainage, and in these cases shock must be avoided if possible. I am talking about cases associated with any cardiac disability.

One more point, and then I am finished. Dr. Ransohoff spoke of enlargement of the liver in one of his cases. I believe the physician in any suspected case of gall-bladder disease associated with a decompensated heart particularly, should palpate that liver with the utmost care. If the cholecystitis itself is responsible for the change in the shape of the liver, he will be careful palpation detect not only tenderness and great rigidity of the right rectus muscle, but he will discover either a small Riedel's lobe, or discover the right lobe of the liver is proportionately more increased in size than the left, whereas if the decompensated heart is responsible for the hepatic congestion, the entire liver will be found enlarged and palpable. Therefore, I think by very careful exploration of the liver itself by palpation, with a careful history of the case, the physician will usually be able to determine that the hepatic engorgement is secondary to the heart rather than secondary to the gall-bladder, and that the gall-bladder disturbance may be a minor consideration in the case. It is

difficult to make the differentiation in these cases, but I want simply to emphasize the fact that the internist as well as the surgeon must explore these cases clinically with the utmost care and individualize them, and not assume simply because there are symptoms pointing to gall-bladder disease, the gall-bladder itself is the organ primarily responsible for the whole set of symptoms.

DR. CHARLES TRAVIS DRENNEN, Hot Springs, National Park, Arkansas: I wish to accent the statement just made by Dr. Babcock, concerning the administration of belladonna.

One of the effects in the administration of this drug is to draw blood from the deeper vessels to the periphery. Now the same thing can be done—with better effect, in my opinion—by hydrotherapeutic measures. It is well known that the skin under certain conditions can be made to carry at least one-third of the entire blood supply; some authors think it capable of carrying as much as two-thirds the entire supply. When we consider the skin from an anatomical and physiological standpoint, knowing its capacity for taking in and giving off materials—both beneficial and hurtful—and remembering particularly, its enormous nerve supply we can readily understand that it becomes the most direct route to the central nervous system, which controls all. With this in mind, we can not fail to understand what a wonderful weapon we possess in the proper administration of this remedy in such cases. It becomes necessary, of course, to fully understand its physiological effect in order that we may obtain the desired results.

It should not be forgotten that hydrotherapy is a science within itself, and I regret that its uses are not better understood by the profession at large. That it is capable of good when properly applied or evil when misapplied, goes without saying.

DR. JOHN L. TIERNEY, St. Louis, Missouri: I want to accentuate the essential points brought out by the first essayist, and that is a recognition of the lymphatic histology or anatomy of the bile duct system and its general environment. I do not believe it is fully recognized or realized that we rarely have infection of the gall-bladder itself or of the ducts without extensive infection extending into and involving the liver, which leads one to the conclusion that we must have drainage as reiterated by Dr. Babcock, and which cannot be emphasized too much. We must have prolonged drainage in these cases. In gall-bladder work the drainage tube is put in and kept there for a relatively short time, and then withdrawn, and we have not eliminated the infection. One argument advanced in connection with cholecystotomy is that we have not drained sufficiently the finer bile capillaries in order to relieve the cholangitis.

The association of gall-bladder disease with heart conditions is striking to any clinician. I have noted irregularities associated with decompensation, and myocarditis is very important. I should like to emphasize the point that we must stop and give some consideration to nonsurgical drainage of the gall-bladder by means of rest, and I think it has a decided place in this discussion. If the reciprocal law enunciated by Meltzer that magnesium sulphate in the duodenum will contract the gall-bladder, and at the same time it will relax the sphincter of it, we have an ideal method. Why does not the sphincter contract the gall-bladder and produce nonsurgical drainage, which has been elaborated clinically by Lyon, the so-called Meltzer-Lyon transduodenal lavage. In cases of myocarditis with surgical intervention, local anesthesia with gas might be dangerous and nonsurgical drainage with a slight degree of trauma might be resorted to, because if the Rehfuß tube is handled properly, there is nothing comparable to the old Ewald tube efficiently handled, and with a minimum amount of trauma in that type of cases nonsurgical drainage must

have a place. As was stated last night by Dr. Smithies in his address, there is a good deal to be gained by the Meltzer-Lyon method, and from my limited experience I think it is certainly of value as Dr. Smithies pointed out so frequently in these cases. It has been my experience in the condition where I felt clinically there was gall-bladder disease, with definite symptomatology, a vague syndrome goes with it. The surgeon in picking up the gall-bladder and failing to express the contents freely may make the statement that there is no disease of the gall-bladder; that there is cholecystitis with also secondary cholangitis, with no lymphoid involvement, no thickening, a condition of so-called strawberry gall-bladder, with the second and third degrees of cholecystitis, and that type of nonsurgical drainage has a place, and I do not see it included in the cases under discussion today.

DR. LAWRENCE (closing on his part): I am delighted at the free discussion this subject has elicited. I want to say, that in practically all of the bile tract infections there is, because of the relationship of both lymphatics and sympathetic nervous system some cardiovascular disturbance. In the cases in which we have a cardiovascular condition, myocardial degeneration perhaps, whence comes the infection which produces the cardiovascular disease? These conditions occur as a sequence of infection. Where is the source? The question arises whether it is a primary bile tract infection or cardiovascular disease. It is my belief that the cardiovascular disease is secondary to that of the bile tract infection.

So far as infection backing up from the duodenum to the common duct is concerned, it has been tested out in a number of laboratories on animals under pressure, and it was forced back from the duodenum through the common duct, even coloring matter much less infection. One of the peculiar things in this connection in relation to cholecystectomy is that when the abdomen is opened for some other condition later on, it was frequently found, and I have found it a time or two myself, that the gall-bladder had not been removed, and I would not believe the gall-bladder had been removed myself had I not done it. Nature has made a strenuous effort to reform the gall-bladder by dilatation of the remaining cystic duct as a part of the common duct. The gall-bladder is not a vestigial organ like the appendix and the duct has to be considered seriously. On the other hand, if it is possible or probable, I do not say it is not, I doubt if the gall-bladder trouble is secondary to the cardiovascular condition.

What can we accomplish in the way of draining infection out of the cardiovascular system through the gall-bladder? It is a source of trouble, and the bile tract infection may extend back into and involve the cardiovascular system, and the only thing we can drain is the body, and that is not good surgery.

There have been a number of other conditions intimately associated with bile tract infections, one of which I heard Dr. Cabot emphasize in a most wonderful way a few years ago in which the spleen had been removed for supposed Banti's disease. I have had three such cases, not that I removed the spleen, but these patients came under my observation in which either a diagnosis had been made of bile tract infection, with secondary involvement of the spleen, or in which an autopsy had been made and I was present. Dr. Cabot made a statement to this effect: he himself doubts whether Banti's disease ever occurred in the United States; in fact, he questions whether it occurred outside of Banti's clinic. I thought he was rather radical at the time, but I do not know but what he was pretty nearly correct.

There is more or less of an analogy between the removal of the gall-bladder,

with a patent common duct, and a gastro-enterostomy where there is a patent pylorus. If the common duct be patent, there should be free drainage of the bile tract into the duodenum, but these cases are chronic or subacute. Acute cholecystitis is a rare thing. The common duct is partially occluded in both; it is not completely occluded.

Another thing in this connection showing chronicity is the fact that in the very late cases we find clear and yellowish fluids with practically no bile coloring matter in it. In the early cases the bile coloring matter has not been destroyed.

My plea is for an early diagnosis and early drainage to prevent organic destruction of hepatic substance and destruction of the hepatic function, and preventing the toxic effects which result in the cardiovascular changes which occur later on.

There are present in this room two men who had serious and prolonged gall-bladder infection, with most distressing attacks of cardiac asthma for several years. One of them, a physician, finally had his gall-bladder rupture, and it was necessary for him to undergo operation. He has not had an attack of asthma since the operation.

In some of these cases there is a history of prolonged disturbance of hyperacidity and intestinal flatulence because bile is not pouring into the intestine in a functioning condition, and we have the antiferments being destroyed by the infection of the liver. These cases give a prolonged history of so-called indigestion. Remember, hepatic colic is not an early condition of bile tract infection. It is late. It never occurs until stones are formed, or until the common duct is partially occluded, or the cystic duct is plugged with inspissated mucus. It does not occur as a result of the infection until there is more or less obstruction to the free flow of bile into the duodenum, consequently it is a late symptom. Long before this time a saving diagnosis must be made and operation performed. Following this history of hyperacidity, with total acid increase, sooner or later you have a slow pulse and in the majority of cases a large part of the time a subnormal temperature. Generally these patients do not have fever; their temperature is rarely above 98, and frequently as low as 97 long before the attack of hepatic colic. If you examine these cases for rigidity in the upper right quadrant of the abdomen, it can be detected with the fingers of one hand over the abdomen and making palpation until you get definite resistance and you can find it. There is tenderness slightly internal to and midway between the angle of the tenth rib and umbilicus, but by withholding deep pressure there is a sudden relaxation, with pain accompanied by nausea or the belching of gases. In these cases the constipation that occurs is sometimes extremely obstinate, and if a careful examination be made of the stools they will be found deficient in normal bile. There is referred pain over the phrenic nerve about the right shoulder, and which is invariably present but different from the pain of gastric ulcer which is straight through. It differs from the pain of chronic appendicitis which is situated low down. The pain coming on at this point under pressure and distress is not a distinct pain in some cases but a definite uneasiness. Given these conditions the bedside diagnosis is complete, and with a laboratory diagnosis of hyperacidity, there is no question about the proper procedure to carry out.

Let us get down to the point of thinking primarily how we can accomplish the greatest amount of good with the least trauma and most permanent effect. The men who are to make these diagnoses early must be taught that there is no such thing as dyspepsia; intestinal dyspepsia does not mean anything. He wants to discard dyspepsia from his nomenclature and hunt for the cause; that

many of the cases presenting cardiovascular conditions are instances in which the chances are that in 99 cases out of a hundred there is some other source of infection which we will find if we carefully hunt for it.

DR. RANSOHOFF (closing): I became interested in this subject when I read Dr. Babcock's article which was published in the transactions of the American Association of Physicians, and I felt after reading that article that he had said the last word. But it was unusual for a physician to say the last word of a surgical and medical condition so far as the surgeon was concerned. My paper was simply a repetition of the work of Dr. Babcock.

I think Dr. Lawrence misunderstood me. I did not say the gall-bladder condition was secondary to the cardiac condition, nor was the heart condition secondary to the gall-bladder condition. They have to be hitched together.

So far as the Meltzer-Lyon method is concerned, I know very little of the value of this procedure. In most cases with severe gall-bladder infection accompanied by stone and the formation of sero-pus or white bile, you will find the cystic duct completely closed, and I do not see how in a mechanical way the Meltzer-Lyon drainage can help. I called attention to a means of relief of one condition so that the co-existing condition may be overcome.

THE END OF THIS EFFORT TO PROMOTE RESEARCH INTO THE CAUSES OF DEMENTIA PRAECOX

By BAYARD HOLMES

"Venit summa dies et ineluctabile tempus."

In August, 1922, an infection of my left hand which occurred some months previously showed up as a myocarditis, and my physical strength rapidly diminished. Only part of the copy for the October, 1922, number of *Dementia Praecox Studies* was ready for the printer, and my condition did not permit me to see this number through the press. This was a serious event and until the present it has not been possible for me to undertake this work.*

In October, 1922, Addison M. Shelton became Director of the Department of Registration and Education and after thorough investigation determined to carry out the provisions of Paragraph 5 of Section 63 of the Administrative Code which had been passed unanimously by the General Assembly of Illinois of 1921, and provided with an appropriation of \$35,000 to initiate this work, passed in the Omnibus Bill. In November, 1922, at the request of Director Shelton, I was appointed by Governor Len Small a member of the Board of Natural Resources and Conservation, as the "Advisor" provided by the amended Administrative Code. After my appointment the first meeting of the Board of Natural Resources and Conservation was held in Chicago, because of my sickness, early in December, and I was privileged to present a plan for the investigations directed by

*Six volumes are published: Vols. 1 and 2 are completely out of print. A few bound copies of Vols. 3, 4, 5 and 6, which are sold singly at \$6.00 each volume. The series is ended.

the amended Administrative Code. My plan was discussed and adopted by the Board of Natural Resources, and the estimates for the expenses for the second biennial period, amounting to \$150,000.00, were presented in itemized form and recommended by unanimous resolution of the Board to the Budget Committee of the 1923 legislature, together with the budgets for the other research bodies under its supervision, the Natural History Survey, the Geological Survey, the Water Survey, *et cetera*.

My continued sickness required my absence in the South during the winter of 1922-23, and I was not able to attend any sessions of the legislature during the following months, and only one meeting of the Board of Natural Resources and Conservation at Champaign, on April 13, 1923. At the last meeting the plan of initiating the investigations provided by the Administrative Code was further advanced and on my initiative Professor Anton J. Carlson of Chicago was appointed to carry out the equipment of the laboratory and secure applicants for the more important departments of research in order to organize the research in dementia praecox.

It is hardly possible to put this matter of massive coordinate research before the reader without a sketch of the melancholy history of the collapse of every effort at investigation of the causes, the possibilities of cure and prevention of the major group of the insane, now generally termed dementia praecox patients. This review of the history of medicine, so far as it relates to the neglect of research into the cause of dementia praecox, I will try to state as fairly and explicitly as I can. I make no claim at a judicial treatment of the subject nor at an exhaustive treatment. I am one of the friends of the insane, but one who is not ashamed of my association with the disease. During the last fifteen years this subject has engrossed my attention and my efforts to secure the establishment of adequate research into causes and possibilities of cure and prevention have exhausted all my strength, all my energy and all my financial resources. My study of the voluminous but almost barren literature of the subject has convinced me of the great likelihood of a complete solution of the dementia praecox problem, which many alienists, like Christian Scientists, refuse to term a disease. It is my firm conviction that this condition can, as the result of adequate investigation, be recognized in its incipient stages and be prevented by rational methods, yet only guessed at. The already attested fact that in rare instances the most deteriorated and apparently demented patients spontaneously recover and come back to a relatively normal existence with the most exact and circumstantial memory of every event of the years or even of the decades of their mutism and obvious physical deterioration, urges humane physicians to effort and promises to the investigator success in a rational undertaking for cure and prevention. The problem cries loudly to our sympathy and begs for expedition, if not haste.

The problem is one of the greatest in medicine yet unsolved, untouched and absolutely neglected. It is peculiarly an economic, a political, and a

statesman's problem. A large public expenditure is now devoted to so-called "custody of the insane" and more than half of this expenditure is for the dementia praecox group that makes up more than sixty per cent of the asylum population. These patients are generally committed early in life, they very rarely recover sufficiently to be permanently discharged (24 in 24,070 in New York). They live in custody an average of sixteen years and they probably would live longer but for institutional tuberculosis of which more than one-half ultimately die. Each committed dementia praecox patient costs the state for custody alone \$5,650.00 before he is finally buried.

In the United States about 20,000 young citizens are committed to the state asylums for the insane each year. Reflect now, that each patient is a liability of \$5,650.00, which must be met by taxation during the coming sixteen years of these patients' average life. This total liability for the forty-eight states is \$113,000,000.00 for the 1923 annual batch of 20,000. This is a dollar apiece for every man, woman and child in the continental United States. Next year and each year thereafter this liability will grow by a hundred thirteen million more and there is an increment besides for the growing population of our country, another for the acceptance of a growing number of adolescent delinquents now placed in reformatories and penitentiaries, and one may well believe another increment due to the acceleration of stress in the industrial and social life of the youth, especially of our cities.

In twenty years when the population of our insane asylums shall have been renewed by the 400,000 and more dementia praecox adolescents, boys and girls they are, who will be committed to a hopeless custody, the poll tax will have aggregated \$20.00 each for the uncommitted, and the grand aggregate direct state expenses for fruitless custody will have reached more than \$2,260,000,000.00, unless research is undertaken.

Twenty years of aggressive research into cause, cure and prevention of dementia praecox, if half as efficient as the history of medical science promises it may be, will not only eliminate the custodial madhouse from our political landscape, but will relieve the educational force of state and society of a great portion of the expense of our public schools for the retardation which now encumbers education. This expense for grinding over the retarded and the failures is ten per cent of the total educational budget. Intellectual activation will doubtless be in our grasp when intellectual deterioration can be prevented, that is, when the causes of intellectual degradation in dementia praecox and its related psychoses are discovered.

The biennial state budget in Illinois, to be met by taxation, is in 1923 about \$80,000,000. Of this sum the Department of Public Welfare expends \$30,000,000.

One can hardly believe that no direct effort is made in the State of Illinois to discover the cause and the possibility of prevention and cure of

that condition which makes for the largest single item in that thirty million. But such is the case.* No commission of the Illinois State Legislature has ever investigated or taken evidence on the probability of the discovery of the cause of the insanity of youth by adequate, massive, strategic investigation by the several scientific groups that clinical observation suggests. Such a commission was asked for by Senator Thurlow Essington of Streator, Ill., at the last moment of the 52nd Assembly, when Senator Doctor of Medicine Wright of De Kalb, chairman of the finance committee of the Senate, moved to strike out the \$35,000 appropriation for the proposed research laboratory which had passed the House in the Omnibus Bill. (It was stricken out.)

I have never known of any other similar proposition for the appointment of an investigating commission in any other state seriously to discover the opinion of investigators and scientists as to the likelihood of finding by research the cause of the insanity of adolescence or any other insanity and the means of cure, prevention and the diminution of the enormous expenditures for fruitless custody.

Each year, or at least at each Legislative Assembly in each of the forty-eight states, the board of control or other named body puts before the finance committee of the house an estimate for the custody of the committed insane and usually an estimate for a new asylum, or, as they say now, a new state hospital. Never, so far as I know, has any such board of control asked for an investigation of the cause of the condition that made the new madhouse necessary. These boards of control are powerful dispensers of patronage and lavish of the state funds, but they have shown no interest in the discovery of cause, cure and prevention.

Any new fad like occupational therapy, which calls for social welfare organizations of the idle philanthropic and for an extended payroll with corresponding political influence, gets a ready hearing, and here and there an "occupational therapy" is established greatly to the benefit of those patients that can be employed. Far be it from me to disparage occupational therapy and re-education. The fight against restraint must be won by adequate occupation and recreation, but none of these things will be anything but secondary to prevention and cure, which must follow the discovery

*Some years ago when the Finance Committee of the legislature, then new to its work, was presented with the estimates of expense for each of the State Asylums by the superintendents, one after another, backed always by a local representative or senator, an inquisitive farmer member of the committee asked what all this money was for. One might think it a natural question, but his answer was ridicule and contumely. Being a farmer and thinking in agricultural formulae and terms, he persisted until he was informed that the madhouses, which had recently changed their names to hospitals for the insane, were designed to keep crazy citizens, who numbered one in six hundred of the population of the state, in such confinement and custody as would prevent them from interfering with the uncommitted remnant. When the farmer understood he asked what was being done to prevent this mental disease or curing it. After the noisy ridicule and contumely at the farmer's presumption had somewhat subsided and he was informed that there was no cure for lunacy, in the strong words that the linotype won't set up he said he would like to see the disease that would lay out one in six hundred of his cattle or his hogs and no experiment station and no Department of Animal Industry hunting for the cause, cure and prevention. But he said this was not his fight—he was on the committee to see that the farmers got theirs.

of cause by aggressive research. The occupation of the insane in the institutions themselves is subject for separate consideration.

While we wonder at the failure of boards of control, expending millions of the state money annually in pessimistic custody, to initiate research into cause, cure and prevention, we, the friends of the insane, are astounded that the organized and unorganized keepers of the insane, recruited from the medical profession for the most part, have never, so far as we have been able to discover, petitioned any state legislature or any department of the United States Government to institute massive research into the causes and possibility of prevention of the insanity of youth or of any other insanity. Every few years the organization which was once the association of superintendents of public and private asylums, changes its name and its constitution, but it has never, so far as we have been able to discover, passed or even entertained and discussed a resolution to petition any state or department of government to initiate aggressive scientific research into the causes of dementia praecox or any other insanity with a view of prevention and cure.

Are these men and women, so familiar in their crowded asylums with the committed insane, hopeless of discovering rational mechanistic causes and hopeless or careless of the possibility of cure and prevention? They have under their care and in their legal custody four hundred thousand former citizens. They administer the largess of the several states as representatives, not of the associations of the lawyers and judges, not of the society of economists or actuaries, but of the scientific and humanitarian cult of medical practitioners. They have lately taken the name psychiatrists, or curers of the spirit, or soul, or mind. As one of the friends of the insane and in the pursuit of cure and alleviation for dementia praecox here, I have met many of the salaried psychiatrists. They have impressed me as superior administrators, wily diplomats and patient politicians. Few of them have read the literature of psychiatry except in text books and current journals. They are avid for new words and new expressions that can be utilized in talking about patients and dictating their histories. The staff meetings, which are now instituted in many state hospitals, are as scientifically illuminating as Christian Science experience meetings, or as old fashioned Wednesday evening prayer meetings. The superintendents and managing officers are moderately salaried, the remainder of the medical staff get clerks' wages.

Organization, bluff, presumption and heartless inactivity are the watchwords of the institutions for the insane and few physicians ever recover from four years of state service. But there are exceptions. I knew one man who lived in an asylum for twenty-five years and was buried with his unclaimed patients, and he never became a pessimist nor anything but a physician and the friend of the insane. I hope some time to write the story of his life and part of the story of the institution he built up almost

with his own hand. There is no niche in our growing political society that may not nourish a hero.

Practically every legislature in every state in the Union is now besieged with a lobby of medical men and a half dozen lobbies of medical quacks and irregulars. But I have yet to learn that any society of body healers or mind healers, regular medical men and women or of irregular medical men or women, or of osteopaths, of Christian Scientists, of chiropractors or of naprapaths, have ever petitioned or lobbied the legislature of Illinois or any other legislature to provide research laboratories for the discovery of the cause of the insanities, such laboratories and investigations as the farmer demands in case of animal pests and diseases of animals, and such as the horticulturist demands for the investigations of pests of trees or plants.

The Chicago Medical Society, the Illinois State Medical Society, the American Medical Association, covering as they do the same territory, are engaged in a propaganda to cultivate in the laity an esteem and respect for the regular medical profession which respect and esteem they feel undermined by the osteopath, the Christian Scientists and the various medical cults. This propaganda is expensive and members of the profession have been called upon to contribute to its expense. The list of contributors published in the Bulletin of the Chicago Medical Society shows that this propaganda has the approval of a large body of reputable and public-spirited physicians. "Hygiea" is an undertaking of the American Medical Association and is a creditable sheet and ought to wield a wide and beneficial influence.

However, the Illinois State Medical Society has not petitioned the state legislature to institute research into the cause of those conditions for which there is a biennial state expense of \$29,000,000 and a draft by diseases of unknown causes of 4,000 or more from the citizenship of the state. The lobbies of the state and of the local medical societies were not alert to them and an adequate appropriation for research. The Chicago Neurological Society and the Society of Internal Medicine were invited before the Department of Registration and Education, but their delegates had little encouragement to offer, no service, and voiced petty opposition to personal detail. These societies were probably not adequately represented at the conference the Director invited.

One would think that a University would represent the scientific conscience of the community and that a State University would represent the scientific conscience of the state. The State University of Illinois goes biennially to the same legislature for its \$10,000,000 that the Department of Public Welfare goes to for its biennial \$30,000,000. The faculty of the University cannot be ignorant of the ability of its various scientific experts to elucidate the problems of the diseases for which the Department of Public Welfare demands and expends in pessimistic custody \$30,000,000

every two years. Many members of this faculty cannot be ignorant or unmindful of the likelihood of the solution of these problems by scientific research, nor of the added esteem in which the University would place itself before the legislature by actively promoting and advising such research if moderately successful. The University has the support of the legislature, not alone because it promotes erudition, but because its activities are economically and industrially appreciated in every village and on every farm in the state. In the corn field, in the coal mine, in the water works, in the dairy and in the innumerable public and private activities, the advice of the university faculty is relied upon. Faculties are cautious and modest in proportion of the erudition, culture and experience of their members, but they need not be on that account inactive or pessimistic of progress. Faculties are not often aggressive but individual members have been and may be. In discussing plans of research into the causes and possibilities of prevention and cure of dementia praecox, members of widely separated departments of science and members of many different university faculties have agreed upon the need of massive coordinated research and have been almost unanimous on the great probability of a speedy discovery of causes and of great possibilities of cure and prevention.

There are, to be sure, some scientific recluses and pessimists, if not misanthropists, who condemn any practical application of pure science, and they propose to go on adding observation to observation, adding often negation to negation, adding relativity to relativity and closing all doors on application or utility. Such votaries of pure science would say, pursue your researches without object or end, and when the borderland of the known and the explicable has extended beyond the perlieu of any practical problem, that problem will be automatically solved. To such academic serenity, the disconcerted friends of 160,000 committed adolescent insane have naught but speechless wonder to offer. The event of insanity in a loved one, if such paragons of scholastic science can love, would touch the heart and make the investigator human.

The tendencies of the times are pessimistic so far as human betterment is concerned and this is perhaps one of the factors in the attitude of each of these groups one might rationally look to for help in research into the causes, the cure and the prevention of dementia praecox, the maximal insanity.

There is, however, the fact left to consider that our form of government permits any group of organized or unorganized complainants to be heard before the legislatures of our forty-eight autonomous republics. Not one but forty-eight possible sources of relief.

In modern time the various ecclesiastical organizations have signally failed in aggressive efforts at optimistic human betterment. This too may be a part of the deep seated pessimism of an overfed people whose minds and whose philosophy of life have been contaminated by economic pessimism

and by the essential egotism of industry carried on by directories without personal contact between employer and employee, between exploiter and the exploited, between the producer and the consumer. In fact, to the reflecting and unprejudiced mind, if such a condition can be the lot of any man alive, our present civilization can hardly fail to appear anything but pessimistic and an argument on any other basis is futile. Still the fact remains. The churches as institutions, even the scattered but self-conscious body of Quakers, with their historical penchant for the service of the lunatics, have deserted them almost completely. A flower day and a visiting society is all that connects the churches with the lunatic asylums.

But since the monks and nuns of the middle ages took in the witches, the wizards and those possessed of the devil, and did their part, in their time, we can hardly hold them to any responsibility for the absence of research into cause, cure and prevention by the various political states that now have had exclusive care and custody of them since the days of Dorothea Dix.

At Gheel, in Belgium, for 600 years the church has co-operated with the citizenry in the friendly and open door entertainment of the sick in mind. The church has perhaps lived up to its light, but not to its opportunity. Had the church done its best on a large scale would there have been enacted the human tragedy of the Gaderian, keeper of the swine that ran down a steep place into the sea; and would the churchmen have been best, to depart out of their coasts, as was their prototype 1923 years ago?

Hardly ever does any erudite and scholarly person discuss the possibilities of research for psychiatry with me without soon asking what Rockefeller Institute is doing and what is done at the Mayo Foundation. These institutions are in a front place in the public mind. I am obliged to say that the state has a monopoly of the patients with diseases of the mind and that no research can be carried on without cooperation with the state asylums and particularly under state authority. The state is financially the sufferer. There are plenty of diseases and conditions to exhaust the resources of the Rockefeller Institute and all other private institutions.

One of my ardent and perhaps too appreciative friends, whose brother died after suffering of dementia praecox more than a decade, and after his care had completely ruined the family financially and broken down his doctor sister physically, wrote a brief for the dementia praecox patient as he would have written one for a legal client. He then made a plea and a petition to the Rockefeller Institute, begging that they inaugurate research into the causes of the disease, the possibility of cure and prevention. He submitted this petition, plea and brief to President Vincent and after some weeks received a full and courteous reply, which may be summarized in a few words, and I hope fairly.

1. The Rockefeller Institute undertakes such activities as the acknowledged leaders of thought in any sphere of science look upon with the greatest unanimity as most urgent and promising of accomplishment.

2. This matter of dementia praecox submitted to the "acknowledged leaders in psychiatry" has not been received with unanimity.

The Otho S. A. Sprague Bequest was at one time expected to undertake research into the causes of dementia praecox and of course in the possibilities of cure and prevention. This gave great hope of a favorable co-operation between the State of Illinois and the Institute, but came to naught.

And so it is come to this. I can personally do no more. Spiritually and physically I am disheartened. I bid farewell to the 160,000 youths in the madhouses of the forty-eight states, and the greater number who are in the retarded classes of the public schools and in the labor turnover. I am down and out, but not melancholy. I have done my best and I am confident that the problem of dementia praecox will yet be solved and the methods of mental acceleration necessary to a higher plateau of civilization discovered. The hope of the continued occupation of our world by men depends no longer on the increasing acquisition of power over the physical resources, earth and air, but upon an increasing power over the activation and the development of the body, mind and soul of the coming citizenship. The punitive functions of our society and the towers of the abandoned spell ruin. The oubliettes for the sick of mind are scandalous and degrading. Research in pure science is individually ideal, but the work of the votaries of philanthropy is concerted, strategic, scientific assault, the liberation and restoration and rehabilitation of the segregated.

VALE

POST-OPERATIVE CARE OF A PROCTOLOGIC PATIENT

By CHARLES J. DRUECK, M. D.

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The post-operative care of the patient is greatly simplified by the proper pre-operative preparation. To combat shock, collapse and pain, are the immediate requirements; to prevent pneumonia, peritonitis, adhesions, wound infection and other complications are also matters of importance. Rational and physiologic means prove wonderfully effectual in meeting all these indications.

The crowning achievement of scientific medicine is prophylaxis and there is no branch of medicine in which preventive medicine may be more successfully and more appropriately employed than in surgery. This is especially true with reference to shock.

All operations occasion more or less physical and psychic trauma, varying in intensity according to the vitality of the patient, the loss of blood and the character of the operation.

Prevention of Shock: The measures upon which I rely for the prevention of shock are the following:

(1) Saturation of the patient's tissues with water by copious drinking, and, if necessary, the use of retaining enemas for a few days prior to the operation and the morning of the operation.

(2) The employment of a skilled anesthetist who carefully watches the patient.

(3) Small wounds, delicate handling of the tissues and as great celerity as possible in operating.

The patient's bed should be prepared with a broad rubber sheet under the linen draw sheet on which he lies and a light weight blanket between the patient and the upper sheet to be removed after the patient has reacted. As soon as the patient arrives at his room, he is placed at once in a warm pack which should extend from his feet to the hips or even to the shoulders. (Fig. 1). This blanket measures four feet by six feet and is so constructed that it is as flexible as an ordinary bed comfort.

The automatic controlling device, which is attached to these blankets, insures the person operating the blanket that any desired degree of heat can be supplied to the patient. The blanket can be attached to any ordinary light socket.

The electric radiator oven (Fig. 2) by which the heat of incandescent lamps may be utilized, is also a good heating measure. These are so constructed as to be variable in length, width and height. Care should always be taken to avoid overheating.

In an emergency where the above described technic cannot be used hot water bottles or cans may be the only method available. If these are used they may be placed along the sides and at the feet of the patient with a

single thickness of blanket between them and the patient. They must be constantly watched that no burns are produced.

As soon as the skin is well warmed, a cold towel rub or mitten friction is applied to the entire surface of the body not covered by the dressing. Cold friction not only energizes the heart and thus raises the blood pressure but stimulates the peripheral blood vessels, thus directly combating shock.

The room should be darkened and the patient kept perfectly quiet and under constant surveillance of the nurse until the effect of the anesthetic has passed off. Restraint may be necessary to prevent the patient from falling out of bed or tossing continually to and fro.

Position in Bed. It is not necessary or well for the patient to remain constantly on his back but may be turned from one side to the other or assume that position which may make him more comfortable. When the patient lies on his back a hair pillow under the flexed knees gives a more comfortable position. Most patients are more comfortable if allowed to change their position frequently.

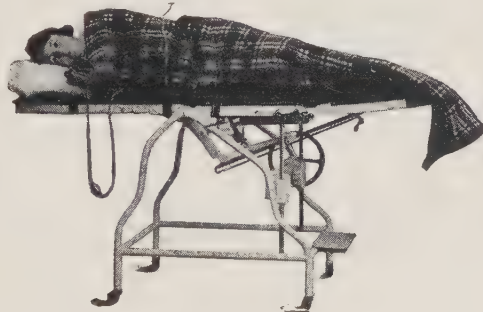


Figure 1

Dressings. Asepsis and rest of the surgical field are the essential factors to be considered by every operator. That operative technic should be selected which requires the least surgical attention for at least forty-eight hours after surgical interference.

Gauze impregnated with a mixture of petrolatum 2 parts, castor oil 2 parts, yellow wax 1 part, is very much to be preferred to ordinary dry gauze as it does not stick to the tissues.

The first dressing should always be made by the operator in the presence of his assistant and the nurse in charge. Full directions as to the after care and meeting of possible emergencies should be outlined at this time. The patient should be visited and the operative field inspected every day while confined to his home or hospital.

Toilet. As soon as consciousness has returned our patient's hands and face are bathed in cool water and the mouth cleansed with a gauze sponge dipped in ice water. Later the patient may gargle the throat and rinse the mouth with warm water to relieve the thirst and the unpleasant taste of the ether.

The morning after the operation the patient is given a partial alcohol bath (alcohol 1 part, water 3 parts) at a temperature of 120 degrees F. After a day or two regular sponge baths of warm water and soap may be given.

The night dresses should be made to open in the back, to be worn like a pinafore.

Our patient convalescent from a rectal or other pelvic operation must be able to rest quietly and should not be allowed to suffer pain lest cardiac depression and exhaustion occur.

Sedatives. If the patient is weary and restless a tepid sponge bath followed by gentle rubbing and a cup of hot tea or broth will often take the place of a narcotic.

If there is likely to be much pain or suffering during the first day, a hypodermic injection of morphia sulph. gr. $\frac{1}{6}$ given before consciousness has fully returned, will be found much more satisfactory than a larger dose given when suffering is already severe. Occasionally morphine may be necessary to secure sleep during the first night but it must not be continued longer than twelve hours. The free use of opiates is most pernicious by tying up the bowels unnecessarily (often for a week or more) and thus contributing to enormous tympanitis, the importance of which cannot be overestimated in all pelvic or abdominal operations. When the effect of the anodyne is gone, the patient usually suffers more than before and a drug habit may be formed.

The application of heat over the wound and to the lower extremities immediately following the operation, even before the patient is fully out from under the anesthetic, prevents the development of the nervous state in which slight pains are so exaggerated, making the patient restless and irritable. The hot blanket applied immediately after the operation not only combats shock and collapse but also relieves pain to such a degree that the patient often sleeps during the application, and usually gets several hours sleep during the first night without the use of drugs.

Sandbags to prop the patient up on all sides so as to relieve tension are of great service. The sand bags may be heated if the effect of heat is needed.

Keeping the bowels empty by means of warm enemas will often obviate the use of an opiate by preventing gas pains. Gas pains are greatly lessened by avoidance of the use of laxative drugs before the operation.

Thirst. If our patient has been properly prepared his thirst following the operation will not be severe, often not asking for water during the first 24 hours. This is quite different from the overpowering thirst that

may appear if the tissues have not been previously saturated. Ordinarily the patient may receive water as soon as he desires it. An abundant supply of water is essential after every operation to carry off the shock toxins, replace the lost fluids, and to promote heart action. A half pint of water every hour is given if there is no vomiting. The quantity of urine is the best check upon the faithfulness and efficiency of the nurse in getting the patient to take and retain the three or four quarts of water daily required.

Nausea. Nausea following the anesthetic is variable, depending somewhat upon the length of the operation. No nourishment can be given while the vomiting exists, and, in extreme cases where this condition continues for several days and the exhaustion becomes serious, nausea will often be relieved by sipping hot water a teaspoonful at a time, to which

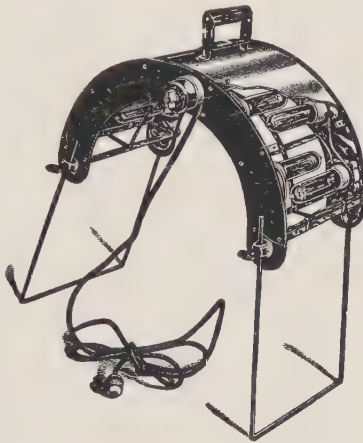


Figure 2

has been added a few drops of Tincture of Capsicum. A mustard plaster over the pit of the stomach, or the application of the moist girdle, with a hot bag over the stomach, is a very effective means of controlling post-operative nausea and vomiting. This simple but effective measure acts by lowering the tonus of the gastric musculature and thus checking the violent contractions to which Carlson has shown nausea to be in most cases due. Other well-known measures are of course employed when indicated. Turning the patient on the left side often prevents nausea and vomiting by relieving the strain upon the cardiac orifice. Severer forms of vomiting require washing out the stomach to remove the detritus and poisons contained.

Post Operative Feeding. The subject of post operative diet of surgical patients entails so many consequences, good and bad, that a book may be filled with its consideration although it has received far less attention than its importance demands.

We are prone to be overengrossed with the pathology of the disease under consideration or with the technic of the surgical procedure performed, and thus to forget the patient, himself, and his disturbed metabolism. This disturbed physiology will, of course, vary with each patient. In many cases the patient's nutrition has been seriously interfered with some time before the operation by the conditions which make the operation necessary and the starvation of patients, either before or after operation, is not only unnecessary but is highly prejudicial to the patient's interests, lessening the chance to recovery and increasing the danger of serious complications. Food is a most important regulator of metabolism. Assimilated food furnishes the material upon which the cell works, both in the performance of its functions and in the repair of its own structure. If material is not supplied in the form of food, the body must draw upon its tissues.

Food, likewise, is the only source of energy for the body. The heart alone consumes approximately two ounces of sugar every twenty-four hours in doing its work in the circulation of the blood.

The organs concerned in trophodynamics must be coaxed into the greatest efficiency possible under the handicap left by the disease or the injury. In diseases of the rectum, the diet must be suitably modified according to the gravity and character of the conditions encountered and the capacity of the organs of digestion, assimilation and excretion.

Post-operative feeding is an accomplishment in which but few are talented. The most important item of a hospital-diet is, the tray itself, and, about this, is demonstrated the ability of the nurse to devise and arrange the dishes supplied artistically and, by neatness and daintiness, to appeal to the fickle appetite of the sick. The "psychic stomach" is no less important than the anatomic stomach.

The patient operated upon under a local anesthetic will desire food at once and more generously than will a patient that underwent the same operation under inhalation anesthesia.

So much food and drink is to be ingested as will refresh but not oppress the powers of the body.

Not only does each different food meet with a different response from the tissues, but, even the same food elicits different responses from the same body, at different times, the organism being very far from a constant entity.

Furthermore the power of extracting the nutritive elements from the food varies greatly with a given individual, as also with the same individual at different times. Also the power of absorption, of storage and of synthesis of these constituents, that is assimilation,—varies with the individual and his condition of health, as does the power of developing energy from these potentials.

Food furnishes a physiological stimulus to the living cells. The rapid loss of strength and endurance as the result of fasting, and the marvelously rapid restoration of energy by appropriate nourishment, afford ample evi-

dence of the helpful stimulus which may be secured through proper feeding. This stimulation is doubtless due in large measure to the presence of vitamins which abound in certain foods and in which vegetable broths are rich. These vegetable broths differ from bouillon and animal broths in the fact that, while rich in vitamins, they contain no urea and other waste matters of which animal broths are largely made up while containing vitamins in small amount only.

The eating habits of most patients lead to an accumulation of protein wastes in the tissues. Since all excess of protein must be eliminated as urea and other nitrogenous wastes, both the liver and kidneys are overtaxed by this excess protein metabolism causing a predisposition to acidosis and uremia. In addition to these waste products from excessive protein metabolism, the blood and other body fluids are likely to be saturated with toxins of bacterial origin derived from the colon. On this account it is most unwise to feed a prospective surgical patient large quantities of meats of various sorts as a means of preparing him for the operation, or to advise such a diet for promoting convalescence after operation. On the other hand, a low protein diet for a few days before the operation and immediately following the operation, is most advantageous. The blood may be more rapidly built up by a lactocereal diet, with the addition of liberal quantities of greens, than by heavy meat feeding.

There is usually a sufficient amount of fats stored up in the tissues to supply the needs of the body for a few days, and the fat intake in post-operative cases may be advantageously diminished because of the inhibitory effect of the operation upon the secretion of gastric juice, which is important in gastric cases especially in preventing the putrefaction of stagnant gastric fluids and so maintaining conditions favorable to healing. It is well to remember, also, that the body is able to manufacture fat from carbohydrates and that starch and sugar are, under normal conditions, the chief sources of body fat.

Abundant carbohydrate feeding is a matter of chief interest in relation to surgical cases. Farinaceous foods of all sorts, fruit juices and malt or milk sugar are the most appropriate materials for feeding a patient on the days before operation and two to five days succeeding. The feeding should begin as soon as vomiting is controlled that the food supply rather than the tissues of the patient may be the source of energy toward preventing exhaustion.

Food is a natural laxative. Taking food into the stomach sets up peristaltic waves which travel over the entire intestinal tract thus encouraging evacuation and the elimination of waste matters from the colon. It is even advantageous at times to use moderate quantities of agar or gruels containing bran. By supplying stimulants in these forms, the early restoration of normal bowel action may be greatly encouraged.

When the operation performed upon a patient of average reserve strength is of moderate severity, rice gruel, one-half ounce every 2 hours,

malt sugar solution (2 ounces of malt sugar to the pint) or fruit juice of some sort, is given in spoonful doses hourly, beginning as nausea ceases. After the first few days, spinach puree may be added to promote blood building and thorough evacuation of the colon.

The victuals must be changed from day to day, while such physical aids as massage, fresh air and change of environment must be provided. Following all surgical procedures in which shock is evidenced, the stomach partakes of the general debility, so that the patient is, for the time being a "dyspeptic" and must be fed accordingly. If there is any question as to whether stimulants are indicated or not, it is best to exclude all alcoholics. A very common cause of interruption of the progress of convalescence is the allowance of an excess of food, which may cause a rise of the temperature, vomiting, and even purging, in nature's effort to rid itself of the surplusage.

Bouillon, beef juice, broths and similar preparations are carefully avoided. Vegetable broths, which are quite as appetizing as any of the preparations mentioned and wholly free from unwholesome properties, are freely used. A bouillon prepared from yeast extract so closely resembles bouillon, or extract of beef, that it is readily accepted in place of it, and is, in fact, found more palatable. Besides this yeast extract is richer in vitamins and in iron than any other substance.

Gruel diet is relied upon only for a very short time, a few days at the most. Simple purees of vegetables and fruits are allowed after the first two or three days, and these are accompanied by agar jellies and agar in substance or special bran preparations to encourage bowel action. Purees of spinach or other greens are daily on the menu in some form. These lime and iron containing foods are essential to rapid blood building and tissue repair and help to sustain the heart in its arduous work. Green foods are also rich in the vitamins which are as essential for the rapid repair and rebuilding of the tissues as for the normal growth of young animals.

Every meal is carefully balanced not only for proteins, fats and carbohydrates, but for cellulose, food lime and iron and other salts and vitamins. The ordinary hospital diet is woefully deficient not only in lime, iron and vitamins but in cellulose, the natural laxative element of the food.

The following articles of food should be rigidly eliminated: fats, purely starchy dishes, rich gravies, sauces, custards, patties, hash, recooked meats, and all highly seasoned foods.

The following plan of a day's menu will serve as an outline, this to be modified according to the individual patient's habits and the seasons of the year:

Breakfast: Fruit (one orange or a bunch of grapes, or one-half of a large grapefruit, or a baked apple, or a dish of cooked fruit, such as prunes, peaches, apricots); two slices of crisp bacon or two eggs, with two muffins or gems, or slices of toast with butter; or a dish of porridge with cream; and coffee, either black or with cream and sugar.

Lunch: A bowl of vegetable soup or puree with crackers; a sandwich or two rolls with honey; a glass of buttermilk or fermented milk.

Dinner: A bowl of soup; one lamb chop or a similar amount of beef or poultry; two slices of bread; one potato; a salad; green vegetable, such as spinach, stringbeans, asparagus or cauliflower; a dish of pudding (rice, chocolate, gelatin or tapioca) eaten with fruit or a fruit sauce.

When it is desirable that there be no fecal evacuation for several days, the fecal bolus may be greatly diminished in quantity by giving our patient an absorbable diet.

Egg albumen water is a tasteless and most nutritious food. It is prepared by beating the whites of four eggs with two ounces of water into a liquid froth and allowing it to stand on ice for an hour. When ready to serve add chopped ice, flavor with lemon or orange juice, or mix with an equal amount of grape juice, or with a teaspoonful of sherry wine.

Additional articles of diet are broths of chicken, oysters, clams and beef and may be alternated with other liquids. About eight ounces of such nourishment per day should be given in this way.

An albuminous diet consisting of meat and eggs with avoidance of vegetables, butter and fat tends to constipate. Lauder Brunton (Sutherland's "Diet and Dietetics") found that many individuals go two weeks without having an evacuation of the bowels, especially those that lived upon a dietary of fine white bread, butter and tea, foods that leave very little residue. Individuals with defective teeth cannot thoroughly masticate their food, and, therefore, select such foods of diet as require little chewing, and, for this reason, often become constipated. The excretions of the alimentary tract when not properly voided are absorbed and thus give rise to various disturbances.

Hertz ("Index of Treatment") declares that for the rational treatment of constipation, it is necessary to distinguish between the two great classes of cases: (a) that class in which the passage through the intestines is delayed, while defecation is normal; intestinal constipation and (b) that in which there is no delay in the arrival of the feces in the pelvic colon, but, their final excretion is not adequately effected; pelvic rectal constipation or dyschezia.

The mechanical stimulation to peristalsis and evacuation depends upon the direct irritation by the undigested food and upon the distention produced by the bolus.

The intestinal juices and bacteria are increased by vegetable foods containing much cellulose by sugars, organic acids and fats, as also by a sufficiency of water and the avoidance of astringents. Olive oil is valuable in the treatment of constipation, but liquid paraffin is probably more satisfactory, because its action is entirely mechanical. Not being absorbed it does not disagree with the stomach as vegetable oils are liable to do if taken for a considerable time. It may be given in doses of one dessertspoonful in an ounce of cream one-half hour before meals.

Urination: Many patients are unable to empty their bladder after rectal and perineal operations, because of the spasmodic contraction of the sphincter vesicae muscle. This is partly due to the fact that they are lying down, and could they be allowed to assume some other position they would have no trouble whatever in this respect. This may be avoided to a great extent by having them abstain from fluids as far as possible, for twenty-four hours before the operation, directing them to empty their bladder the last thing before going to the operating room, and not try again for several hours after being returned to their room. No effort should be made to have the patient empty his bladder until it is reasonably full. This may vary from 10 to 15 hours and should be watched by the surgeon by carefully palpating the supra pubic region every couple of hours. When the bladder is reasonably full or the patient wishes he should be allowed to urinate and unless there is some contraindication he should be allowed to get out of bed. If he tries and fails, the catheter will have to be used for several days, while if he succeeds the first time it will not have to be used at all. Of course, sometimes it is necessary to use a catheter but its use must be discontinued as soon as possible.

Bowel Evacuations: Just how soon the bowels should be moved after an operation depends upon the nature of the operation and the patient's condition. The tendency with surgeons in general is to be too anxious and to work unnecessarily hard to produce a bowel action. If the patient has been properly prepared his bowels need not be emptied ordinarily for a few days. By attention to diet and liquids this period of retention may be controlled.

After many rectal operations it is very important that the stool be soft and mushy in consistency when evacuated. This may be assured by administering an enema of olive oil or mineral oil 3 ounces and water 1 ounce. This is given each day. If hard inspissated masses form they may be softened by injection of 1 part hydrogen peroxide and 3 parts water and later washed out with an enema of 1 quart of water to which has been added 3 tablespoonfuls of baking soda and given at 95 degrees F., a large size soft rubber urethral catheter attached to an ordinary household or fountain syringe is very satisfactory if plenty of time is taken.

Tympany is usually relieved by evacuation of the bowels but if recurrent and distressing our patient should be given 2 drops of Tr. of Capsicum in a half cup of hot water to be sipped slowly.

Enemas and frequent changes of dressing are unnecessary if the patient has been properly prepared, they cause pain and invite infection. Our patient should be taught to wait upon himself as early as possible.

Regular habits should be established at an early date. He should respond at once to the desire for defecation, rather than yield to the inclination to defer, fearing possible pain. The parts should be cleansed with sterile water, gauze or cotton and should be properly protected as long as there are any abrasions which might serve as avenues for infection.

Post Operative Colon Stasis: Colon stasis, due to a spastic condition of the descending colon or any other cause, often becomes exceedingly troublesome and leads to disaster especially in cases of abdominal surgery. The presence of fermentable residues in the colon leads to gas fermentation, often with enormous distention, giving rise to gas pains which greatly disturb the patient, preventing rest, and thus tending to produce exhaustion.

This condition may be combated by putting the patient under treatment for regulation of the colon activity some days or weeks in advance of the operation. Cathartics must be avoided and the colon should be evacuated with water at a temperature of 102-105 degrees F., one of the best means of combating the gas pains following a laparotomy.

The ordinary hospital regime, especially in abdominal cases, tends to produce post-operative constipation. Before operation, the patient is purged, and his intake of food greatly reduced. He is usually instructed to avoid coarse vegetables. The day before operation, the patient takes extra oil and salts of some sort to prepare him for the operation. The effect of this is contraction of the descending and pelvic colon, a spastic condition which renders evacuation of the bowels almost impossible. Gas accumulates in the cecum and small intestines, ascending and transverse colon, and the patient suffers awfully through inability to get rid of the gas. Constipation is increased by the use of morphia taken before and after the operation. The diet is usually of a constipating character consisting of bland gruels, etc., so-called "light diet." All these bland foods are constipating unless supplimented with parafin oil and bran, which may be taken in very moderate doses at first and gradually increased later.

A copious enema, two or three pints, also promotes peristalsis. This enema should be 85 to 90 degrees F. This induces the passage of a peristaltic wave the whole length of the intestines, and by this means straightens out kinks or folds in the intestine, and places each convolution in its own particular place. The efficiency of the enema is increased by adding Malt Sugar to 10 per cent, Molasses or Corn Syrup may be used instead but is less efficient. Sugar used in this fashion is also a most efficient means of combating acidosis, a condition which is always present after profound general anesthesia regardless of the anesthetic used.

The sugar water enema (an ounce and a half to the pint) is also beneficial in preventing putrefaction in the colon and thus prevents the toxemia which rapidly develops when intestinal stasis occurs in a depressed, feeble patient, still further crippling the liver, kidneys and other organs associated with the ultimate metabolic processes of the body, particularly the thyroid and the adrenals which have had to perform the great task of dealing with the anesthetic.

Kellogg (John Harvey) of Batt'le Creek, Michigan, was the first to recommend the post operative testing of the intestinal mobility. The first

night after the operation, the patient is given a carmine capsule and a little later a dose of mineral oil. The purpose of these is to act as indicators of the intestinal mobility. When the carmine and oil appear in quantity one knows there can be no serious obstruction. The appearance of the carmine at the end of forty-eight hours, or even later, is an almost equally good omen, though it is, of course, possible for obstruction to develop at a later period. On this account, it is necessary to apply the test again after two or three days. It is, in fact, well to repeat the carmine test again after two or three days intervals so as to have a constant and intimate knowledge of the behavior of the alimentary tract during the whole convalescence. If the patient suffers from vomiting on the third day following the operation, and if the carmine or oil has not appeared in quantity an x-ray examination should be made. Case in 1915 observed that the outline of the distended gas filled intestines may be recognized by the x-ray without the necessity of administering barium.

Temperature: The temperature must be carefully watched. A slight rise to 100 degrees F. on the second or third day may be due to absorption and usually drops with the first free emptying of the bowels. If the rise of temperature persists for several days it is probably due to infection and the wound must be carefully examined immediately for any hard, red, tender areas, which if found necessitated the removal of a stitch or the separation of the incision edges to facilitate the discharge of pus. When the pus has escaped the temperature falls at once. The pulse is usually a little rapid, 100 beats per minute, for the first couple of days. Following shock it may be 120 per minute, but a rising pulse rate always requires investigation. ?

In order to hasten and insure the normal function of the sphincter some form of massage should be instituted, beginning about ten days after operating. The protected finger, a Wales Bougie or one of the many dilators on the market may be employed.

Convalescence is not at an end when the patient is able to leave the hospital. Sometimes some of the discomforts persist for months, only disappearing gradually and our patient must be kept under observation until he has regained his physical and nervous poise. Fresh air, diet, rest, tonics and encouragement are the most important aids at this time and a change of environment as is brought about by a sojourn at the sea side or in the mountains will often bring about a wonderful change.

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TO THE SUBSCRIBERS AND FRIENDS OF DEMENTIA PRAECOX STUDIES:

The death of Dr. Bayard Holmes on April 8, 1924, brings to a close the publication of the magazine of which he was editor, *Dementia Praecox Studies*. This magazine was founded in 1918. Volumes 1, 2, 3, 4, and 5 were completed, with the exception of Number 4 of Volume 5, 1922. The failing health of Dr. Holmes made necessary the postponement of this issue and of Volume 6, with which he intended to close the series.

It is possible that from the papers and manuscripts left by Dr. Holmes, sufficient material may be compiled to warrant the publication of the closing volume (Volume 6, 1923) in one issue. Should this be done it will be forwarded to subscribers in the usual manner.

DEFENSE TEST—SEPTEMBER 12, 1924

1. This advance bulletin of information, covering a "Mobilization Demonstration" or "Defense Test," is furnished all officers and prominent civilians in the Sixth Corps Area in order that they may assist in the organization and publicity for this demonstration.

2. The Secretary of War, under the direction of the President of the United States, has decided to initiate the first Mobilization Demonstration or Defense Test for the whole United States on September 12, 1924, the Sixth Anniversary of the Battle of St. Mihiel.

3. The main object of this demonstration is to show the public the progress of Mobilization, to demonstrate to each local community where units are allotted the amount of dependency of the unit on the community—the contribution in personnel—demands in shelter, and other matters that would be expected from each community in the event of a National Emergency and to test the efficiency of our Mobilization Plans. Through this means, it is desired to interest the citizens of each community in the Corps Area in our Mobilization Plans for National Defense.

4. This Defense Test will have two main objectives:

1st: Patriotic Demonstrations of the General Public.

2nd: Test Mobilization of the Organized Units of the Army of the United States.

5. It is planned to have a "Patriotic Demonstration" by the public in every city, town and community in the United States on this day, which will be participated in by all loyal and patriotic citizens of each community.

6. The patriotic demonstrations will consist of patriotic assemblies, parades of the local units of the Army of the United States, State Guards and Constabularies, Civic and War Veteran Societies, Reserve Officers Training Corps, Schools, Boy Scouts, and such other organizations as may be developed in each locality.

7. The patriotic demonstration in each community will be organized and conducted under the auspices and management of local mobilization committees, who will be given full assistance and cooperation by the commanders of all local units of the Army of the United States, i. e., the Regular Army, the National Guard and the Organized Reserves.

8. The plan of organization for this patriotic demonstration is to have a State Mobilization Committee for each State in this Corps Area and a Local Mobilization Committee for each local community in this Corps Area; these State and Local Mobilization Committees to be appointed and organized by the State Officials from patriotic citizens of the respective State and Local Communities. These Committees will be given full charge of the organization and all arrangements connected with the patriotic demonstrations.

9. The local commanders of units should work with the local mobilization committees and give them every assistance in carrying out this demonstration.

10. It is planned to have each local unit of the Army of the United States filled for the day with civilians of military age who volunteer for the day only, to serve with the unit and participate with it in the parade and patriotic demonstration.

In securing men for the above purpose, local commanders should confer with their local mobilization committees and the invitation for such participation should be issued by unit commanders and local committees after the matter has been mutually agreed upon.

11. It is the plan and desire of the President and the Secretary of War to make this demonstration, insofar as practicable, a demonstration of the loyalty and patriotism of the civilian population in each local area. With this in view it is planned to give full charge of the arrangements for the parade and ceremonies incident to the occasion to the State and Local Committees.

12. The programs for these demonstrations will necessarily vary with local conditions. The following is suggested:

- (a) Assembly and parade of Military Organizations in such a way as to show the true condition of the United States Army.
- (b) Prayer for our National Welfare.
- (c) Patriotic Music.
- (d) Address or addresses upon appropriate subjects, such as "Appreciation of the Assembled National Defenders," ex-

planation of the phrase "To provide for the common defense" in the preamble of our Constitution; explanation where practicable to the citizens of the community of the detailed plans for local mobilization, covering shelter, supply, training, and sanitary arrangements, that would be necessary.

(e) Organized Recreation and Amusements.

13. All units of the Army of the United States should participate in these demonstrations. Regular Army Units will be used to participate in the demonstrations held in towns and communities adjacent to Regular Army Posts. National Guard and Organized Reserve Units will participate in the demonstrations at their home towns or local communities.

14. The second part of the Defense Test is the "Test Mobilization." This test is incidental to the Patriotic Demonstration and will consist in the assembly of the personnel assigned to each unit at the appointed hour on this day of all present organized units of the Regular Army, National Guard and Organized Reserve, where practicable. These units will assemble at their home stations, armories, or places designated in the local communities, as provided for in their unit mobilization plans; where this is not practicable, units should assemble at any convenient place in the local community for this test. The hours for the Test Mobilization should be fixed so as to fit in with the assembly and parades in connection with the patriotic demonstration.

15. No expense to the Government will be incurred under the above. Additional and specific instructions covering the "Test Mobilization" will be made the subject of a separate bulletin to be issued later.

16. In order to insure the success of this Defense Test, it must be given wide publicity and must receive the enthusiastic cooperation of all Regular Army Officers, National Guard officers, Reserve officers, and prominent citizens in each local community.

17. As you will note, this is a great step forward toward the education of individuals in local communities in their responsibilities and the part they must play in their National Defense. It will show them what units they must assist in organizing and will give them a general idea of our plans for mobilization. Particularly, it will give to all loyal and patriotic citizens in each community a chance to express in a practical way their loyalty and patriotism to their Government in time of peace.

18. It is urgently requested that everyone receiving a copy of this bulletin give this matter the greatest publicity possible, by conversation, talks at gatherings, and by inserting articles in the local papers; as it is only by having every one assist, that the public will be informed as to the purpose of this demonstration.

HARRY C. HALE,

Major General, U. S. Army, Commanding.

MENTAL AMBIVALENCE

There are not in life the basic contrasts that we commonly assume. Among the lower animals the distinction between male and female entails no organic breach. There is oppositeness but not opposition. But with the *mental sophistication* connoted under the distinction "man" and "woman" we have come to assume the presence of an artificial opposition between the male and the female organism. The rigid division between the "artist" and the "artisan," between the dreamer of dreams and the doer of deeds, between people who are "noble" and people who are "base" is equally arbitrary.

These artificial distinctions due to our conventional attitudes of mind are answerable for much needless conflict, as gradually with the individual's growing adaptation he finds himself face to face with the demand that he fit himself into the preconceived pattern of an arbitrary social scheme.

With this artificial condition and its edict of enforced repression there often occurs such a one-sided development within the organism that there results the exaggerated reaction we see in such extremes as the "hero" and the "coward." It is interesting to observe though that upon analysis one discovers within the repressed sphere of the coward's personality all the factors that constitute the personality of the hero, and that within the repressed sphere of the hero's personality there are disclosed all the elements that constitute the personality of the coward!

Such findings as we owe to our deeper penetration into individual psychology make clearer the superficiality of our normal, social distinctions. They afford us reason to believe that when education has loosed itself of its superficial acceptations we shall find that wherever the human organism is permitted to live its own life, free from the suggestive influences of differentiation, there will be no longer the repressed or unconscious instigation to such exaggerated distortions or over-compensations as now issue in the protective pretenses of the coward nor in the masked bravadoes correspondingly characteristic of the life of the hero.—*Mental Health*.

DISEASES WHICH KILL MORE WOMEN THAN MEN

The death rates for the great majority of the important diseases are higher among men than among women.

There are, nevertheless, a number of diseases which, year after year, record relatively higher mortality among girls and women. In most such cases the reason for the excess is obvious. Certain diseases, including cancer, organic heart disease, and apoplexy, show higher death rates among women because this sex has the longer average life span and more women than men live to reach those mature ages where most of the deaths from cancer, cardiac conditions and apoplexy occur.

There are, however, a number of other diseases which show, year after year, higher death rates among females, and for which the reason is by no means clear. The figures for whooping cough, for example, have shown a higher incidence among girls than among boys, which is contrary to what occurs with measles, scarlet fever and diphtheria—the other principal epidemic diseases of childhood.

Then again, tuberculosis of the intestinal tract, contrary to other forms of tuberculous diseases, kills more women than men. We have never seen a satisfactory explanation for this phenomenon. It is a fact, however, that the excess in the female mortality is confined to the age periods between ten and fifty years; and this suggests that the sex difference *may* be due to conditions related to maternity. There is also a possible relationship between non-puerperal diseases of the female genitals and intestinal tuberculosis. It has been suggested by one authority that some disease of the female sex organs reduce the powers of resistance and enable the bacillus of tuberculosis to gain a foothold. In such cases tuberculous peritonitis often follows diseases of the uterus and adjacent organs.

In the United States, women suffer from pellagra to a far greater extent than men. The susceptibility of the former is far more pronounced in America than in Europe. The great preponderance of females over males and the much higher mortality call for explanation. The difference is not so pronounced after age 55 as at the younger ages.

Affections of the endocrine glands (the thyroid, the parathyroid, the pituitary, the adrenal, and the pancreas) uniformly cause much higher mortality among females. Women are much more frequently attacked and this is especially true of all forms of goitre. In Addison's disease, a rare affection of the suprarenal capsule, males are more frequently attacked than females, but females, on the other hand, show the higher death rate.

Diabetes is a disease with a most decided sex incidence. We have frequently commented on the favorable turn in the mortality from this disease, as shown in 1923 and the early months of 1924. When figures are available by sex, it will be interesting and important to determine whether this decline in the death rate has occurred in each sex; for it is a fact that in diabetes mellitus, men are more frequently affected than women—at least more men than women are *treated* for diabetes—but more women than men *die* of the disease. On the face of these data a first-hand deduction would be that the disease has a much higher case-fatality rate among women. One prominent authority on diabetes, however, suggests that the apparent preponderance of the disease in men may be due to some extent to the larger percentage of men who are examined by life insurance companies. The result is that with women, much more than with men, the disease goes undetected. He suggests, furthermore, that the fact that more men than women receive special medical treatment for diabetes, and that, at the same time, more women than men die of the disease, is evidence in favor of the effectiveness of the present treatments.

Chorea, or St. Vitus' Dance, a disease that affects children for the most part, is far more prevalent in girls than in boys. It sometimes terminates fatally, and deaths chargeable to it result directly from complications, rather than from chorea itself. It records, year after year, many more deaths among girls than boys and even at the advanced ages, where relatively low mortality occurs, the same strong sex incidence prevails. Mental conditions, except general paralysis of the insane, cause 50 per cent higher mortality among women than among men.

Anemia, a disease due either to reduction in the amount of blood as a whole, or of the blood corpuscles, or of certain constituents of the blood, is another condition which causes many more deaths among females than males. This is true at every age of life. One type of anemia, known as chlorosis, is, in effect, definitely a disease of girls, the age of onset being usually between the fourteenth and seventeenth year. One prominent medical authority states that it is doubtful if males are ever affected with chlorosis, but he does not venture any opinion as to *why* this is true. One type of anemia, known as pernicious anemia, is more common among males.

Liver and gall-bladder diseases, with the exception of cirrhosis, show, year in and year out, such strong preponderance in female mortality that there can be no doubt whatever of the existence of a definite cause for this phenomenon. In the case of the rare disease, acute yellow atrophy of the liver, the reason for the relatively high female death rate probably lies in the recognized frequent association of the disease with pregnancy. Pregnancy is also believed by medical authors to be an important factor in causing the high death rate among women from gall-stones.

Diseases of the veins and chronic bronchitis are two other conditions more fatal to women.

Among deaths caused by violence there is only one kind, burns, which is charged with a higher death toll among girls and women. Three out of every five deaths from this cause are those of females.

The predominance of deaths among this sex may suggest to the clinicians and to the laboratory students of these diseases, relations which will serve as a clue for directing further research. Certainly, these sex differences are not clearly explained, in many instances at least, in medical literature.



INSANITY AND LAW. By H. Douglas Singer, M. D., M. R. C. P. (London), Professor of Psychiatry, University of Illinois, and William O. Krohn, A.M., M.D., Ph.D. Author of practical lessons in psychology; First Book in Hygiene; and, graded lessons in Physiology and Hygiene. P. Blakiston's Son & Co., 1012 Walnut St., Philadelphia. Price \$6.00.

This book, the work of our foremost psychologists, is of great usefulness to any physician liable to be called into court on the various forms of insanity—criminal responsibility, mental capacity, etc. It is divided into two parts—Mental Disorders from classification of insanities to the various psychoses. Part two deals with the guardianship, insanity and marriage, insanity and criminal responsibility, insanity and testamentary capacity and a most valuable chapter for every physician to read entitled, *The Physician In Court*. The last chapter deals with some suggestions for reforms in procedure and we trust the day is not far distant when our criminal insane will be judged by a board of experts appointed by the court instead of the present criminal method of getting as many experts on either side to confuse the jury in order to secure a verdict of acquittal. Our methods are utterly unknown in the rest of the civilized world, except possibly among the Turks. It is a blot on American civilization, the medical profession and the law.

MANUAL OF HISTOLOGY. By Henry Erdmann Radasch, M.Sc., M.D., Professor of Histology and Embryology in the Jefferson Medical College. Second edition with 333 illustrations. P. Blakiston's Sons & Co., 1012 Walnut St., Philadelphia. Price \$5.00.

This is the second edition of a very splendid manual on Histology, especially adapted for students, but also very serviceable for any professional man who wants to keep posted on present day Histology without having to consult complicated works. This edition has been thoroughly revised and brought up to date. It contains 333 excellent illustrations and 22 new photomicrographs. Several new stain methods have been added to the chapter on technique and the chapter on serous membrane has been highly recast. We also find numerous additions in the section on bone, blood, stomach, spinal cord, and the accessory nasal sinuses. We recommend this book most heartily.

HYGIENE AND PUBLIC HEALTH. By George M. Price, M.D., author of "A Handbook on Sanitation," third edition, thoroughly revised. Lea & Febiger, Philadelphia and New York, 1924. Price \$2.25.

We are much pleased to see the valuable handbook on "Hygiene and

Public Health," by George M. Price appear in the third edition. This book is by no means an encyclopedia, but it is a most practical little book for the average physician, student of medicine and others engaged in matters of public health. It treats in a very clear, distinct and easily understood manner on Housing Hygiene, Child Hygiene, School Hygiene, Industrial Hygiene, Public Water Supply, Milk Supply, Foods, Disposal of Waste Matter, Public Nuisances, Prevention of Infectious Diseases and a concluding chapter on Federal Hygiene, which practically refers to the functions of the U. S. Public Health Service.

We recommend this book most earnestly to all those for whom it is intended. We find a number of changes in the book, new chapters on Hygiene of Childhood and Food, and many alterations throughout the volume. This book gives more valuable information in less space than any other book we know of on this subject.

NATIONAL HEALTH SERIES. 16 mo., full flexible Fabrikoid. Average number of words per volume, 18,000. Price per volume, 30 cents. Complete set of 20 volumes (ready about May 1, 1924). \$6.00.

Funk & Wagnalls Company, New York and London, are publishers of the National Health Series, edited by the National Health Council and published to provide the general public with authoritative books on health. The entire series consists of twenty volumes, 18 vo., average number of pages 70, \$6.00 for the whole set, or each volume separately at 30 cents.

The first deals with "Man and the Microbe," by Prof. Winslow of Yale University, consisting of a description of germ diseases and their prevention by means of sanitation. The second on "The Baby's Health," by Dr. R. A. Bolt, of the American Child Health Association, how to have the baby healthy and strong. The third on "Personal Hygiene," by the distinguished surgeon, A. J. McLaughlin of the United States Public Health Service, covering the important topic of personal hygiene in order to promote the best of health. The fourth on "Community Health," by Dr. D. B. Armstrong, executive officer of the National Health Council, giving the duties of the community in relation with the health of the citizens in order to make each community healthy and sanitary. The fifth volume treats on "Cancer," its nature, diagnosis and cure, and is written by Director F. C. Wood of the Institute of Cancer Research, Columbia University, New York. It describes the varieties and symptoms of cancer, its treatment and prevention, with a timely article on so-called cancer quacks.

We cannot recommend these books too strongly for the laity, and every physician should not only make it his business to subscribe for the series but to recommend it to every intelligent layman.

DISEASES OF THE CHEST AND THE PRINCIPLES OF PHYSICAL DIAGNOSIS.

By George William Norris, A.B., M.D., Professor of Clinical Medicine in the University of Pennsylvania; Visiting Physician to the Pennsylvania Hospital; and Henry R. M. Landis, A.B., M.D., Director of the Clinical and Sociological Departments of the Henry Phipps Institute of the University of Pennsylvania. Third edition, revised. W. B. Saunders Company, 1924, Philadelphia and London.

We say without hesitation that Norris' and Landis' book on "Diseases of the Chest and the Principles of Physical Diagnosis," is the best book on the subject published at the present time. We believe this is the general consensus of opinion in the medical profession. Certainly there is no better book.

This is the third edition which has been carefully revised and considerably enlarged by reason of the fact that several pages have been rewritten and a great deal of new material has been introduced. This edition, of course, embraces all the various approved laboratory methods of diagnosis, but we are very pleased to have the authors say as follows: "It is no exaggeration to state that the art of physical diagnosis, taken in its broadest sense, is as important today as it ever was. He who aspires to achieve success in the detection of disease must acquire the technique of physical exploration; he must have a knowledge of the biological conditions which determine these physical changes."

We again express our unstinted appreciation of the book and advise all our readers who do not possess it to get a copy for their library.

THE CIRCULATORY DISTURBANCES OF THE EXTREMITIES. The Circulatory Disturbances of the Extremities, including Gangrene, Vasomotor and Trophic Disorders by Leo Buerger, M.A., M.D., New York City. Octavo volume of 628 pages with 188 illustrations. Philadelphia and London: W. B. Saunders Company, 1924. Cloth, \$8.50 net.

This is a highly scientific study on certain circulatory disturbances, which are not clearly understood and we quote from the author:

"Perhaps in no other department of medicine has clinical diagnosis offered greater difficulties to the practitioner than in the domain of circulatory, vasomotor and trophic disturbances of the extremities. This subject seems for many to be still enshrouded in much mystery—for even in recent contributions of special investigators no dearth of misconception can be found. It seems appropriate at this junction to assemble, analyze and critically interpret the maze and multitude of facts bearing on these subjects and now at our disposal."

The author has well accomplished his purpose and given us a treatise which throws much light on all disputed points and clears up much misunderstanding. It is a masterly production and covers the vasomotor nervous system in detail, thrombosis, gangrene, aneurysm, thrombo-angitis obliterans in various stages and conditions, arteriosclerosis,

tuberculosis of the arteries, syphilitic arteries, embolism, Raynaud's disease, scleroderma, etc., etc.

This book has to be carefully studied to be appreciated and we are fortunate in having so valuable a guide to teach us.

EPITOME ON BLOOD PRESSURE. Aids to the Interpretation of Blood Pressures for the General Practitioner with Key to Diagnosis, by Burton Baker Grove, M.D. Author of "Handbook of Electrotherapy." The Electron Press, Kansas City, Mo.

This little book contains a large number of valuable aphorisms on matters pertaining to blood pressure and its interpretation, and is for the benefit of the general practitioner, covering Arterial Tension, the Etiology, the Sphygmomanometer, Energy Index, Prognosis and Interpretation with a chart, as well as Treatment. It is a very valuable book and will be of great service to the practicing physician.

"WHAT EVERY MOTHER SHOULD KNOW" about her infants and young children. By Charles Gilmore Kerley, M.D., consulting pediatricist, Fifth Avenue Hospital and the Babies Hospital, New York City.

This little booklet is admirably adapted for use in every household, giving all the suggestions necessary for a mother regarding what she should know about her children. It covers Hygiene, Maternal Nursing, Artificial Feeding, Food Formulas, Later Feeding, Dentition, First Aid to the Baby, and a number of very valuable "Don'ts," formulas, etc. It can be safely recommended to any mother able to read.

OPERATIVE SURGERY. Covering The Operative Technic involved in the operations of general and special surgery. By Warren Stone Bickham, M.D., F.A.C.S., Former Surgeon in charge of General Surgery, Manhattan State Hospital, New York. Former Visiting Surgeon to Charity and to Touro Hospitals, New Orleans. In six octavo volumes totaling approximately 5,400 pages with 6,378 illustrations, mostly original and separate Desk Index Volume. Volume 4 containing 842 pages with 772 illustrations. Philadelphia and London: W. B. Saunders Company, 1924. Cloth, \$10.00 per volume. Sold by subscription only. Index Volume Free.

The fourth volume of this superexcellent work is before us and is fully equal in merit and importance to the preceding volumes. It is a veritable store house of knowledge, an encyclopedia on the subject of which it treats. This volume treats on operations upon the pericardium, the heart, the great vessels, the esophagus, abdominal pelvic walls, hernia, peritoneum, stomach, spleen, pancreas, gall bladder and the general operations upon the intestines as well as special operations upon the appendicocecal tract. We still marvel how one man can produce such a series of magnificent volumes so wonderfully illustrated, and we trust that every surgeon has subscribed for this master work.

THE MEDICAL CLINICS OF NORTH AMERICA. (Issued serially, one number every other month). Volume VII, Number VI, May, 1924. By internists of McGill University, Montreal, Canada. Octavo of 305 pages with 49 illustrations and Complete Index to Volume VII. Per Clinic year (July, 1923, to May, 1924). Paper \$12.00 net. Cloth \$16.00 net. Philadelphia and London: W. B. Saunders Company.

The May issue of the *Medical Clinic* of North America is called the McGill University number, and is a most excellent issue indeed. Among the clinicians, who are nearly all teachers in McGill University and attending physicians at the Montreal General and Royal Victoria Hospitals, are Professors Charles F. Martin, C. Gordon Campbell, F. G. Finley, A. MacKenzie Forbes, A. H. Gordon, W. F. Hamilton, David S. Lewis, F. H. Mackey, and a number of others. Among the subjects considered we may mention pernicious anemia, stenosis of the pylorus, diabetes, pituitary dysfunction, sarcoma of the lungs, tabes, syphilis of the intestines, hemorrhagic diphtheria. These bound volumes with titles on the back and what clinics they represent, makes these volumes much more desirable than formerly.

DIABETES. A hand book for physicians and their patients. \$2.00. By Philip Horowitz, M.D. 34 Text Illustrations. Paul B. Hoeber, Inc. New York, N. Y. May, 1924.

The second edition of this excellent book has been largely rewritten in order to include all the modern progress relating to Insulin, mild diets, etc. Its object is to bring out intelligent cooperation between doctor and patient and this object is admirably obtained. One chapter is devoted to the treatment of Mild Diabetes, very admirable, and often overlooked particularly nowadays when Insulin is made to apply to mild cases of Diabetes which simply require diet and nothing else. We commend this book most heartily.

PATHOLOGICAL TECHNIQUE. A Practical Manual for Workers in Pathological Histology and Bacteriology, including directions for the performance of Autopsies and for Clinical Diagnosis by Laboratory Methods. By Frank B. Mallory, M.D., Pathologist to the Boston City Hospital; and James B. Wright, M.D., Pathologist to the Massachusetts General Hospital and Assistant Professor of Pathology, Harvard Medical School. Eighth edition, revised and enlarged. Octavo of 666 pages with 180 illustrations. Philadelphia and London: W. B. Saunders Company, 1924. Cloth \$6.50 net.

This technique by the well known pathologists of the Boston City Hospital and the Massachusetts General Hospital, Drs. Mallory and Wright, has now reached its eighth edition and is in constant demand, showing how indispensable it is to all students of pathological technique. It is hardly necessary to say that this edition has been thoroughly revised, espe-

cially the subjects of Bacteria, Serum, Blood, Central Nerves, Examination of Spinal Fluid and many others. As heretofore, we give it our unqualified approval.

SPARKS OF LAUGHTER. Price \$2.10.

Here's a book into which you can dip for a few minutes or browse for hours. A book for the long train ride. A book to take home for the enjoyment of your wife and children. A book that makes a delightful gift. A book that supplies an inexhaustible mine of humor for public use and *teaches you how to use it*, for your own pleasure and profit and for the gratification of others. You may hunt your public libraries through, and your bookstores, and, so far as we know, you will not find another volume that does these two things—supplies anecdotal food for laughter, and, at the same time, shows you how to serve it.

This book is primarily intended to call our attention to American humor not always as easily understood as it appears on the surface. However, most of the jokes can be understood by the unsophisticated and probably more enjoyed in reading than telling them. However, we can better describe this book by quoting from the publisher as follows: "Here's a book into which you can dip for a few minutes or browse for hours. A book for the long train ride. A book to take home for the enjoyment of your wife and children. A book that makes a delightful gift. A book that supplies an inexhaustible mine of humor for public use and teaches you how to use it, for your own pleasure and profit and for the gratification of others. You may hunt your public libraries through, and your bookstores, and, so far as we know, you will not find another volume that does these two things—supplies anecdotal food for laughter, and, at the same time, shows you how to serve it." The book contains two chapters to which we desire to call the reader's attention—Suggestions to Toastmasters and How to Tell a Story, the latter chapter is badly needed by the vast majority of our story tellers. For that reason alone, we urgently endorse it.

THE INTERNATIONAL MEDICAL ANNUAL. A Year Book of Treatment and Practitioner's Index. Forty-Second Year 1924. New York. William Wood and Company. Price \$5.00.

This edition completes the 42nd year of the Year Book, which is a most invaluable book, one which the reviewer never fails to read from first page to last, giving a complete synopsis of all the progress in medicine during the past year. Among the distinguished list of contributors we may mention our own Professor E. Wylls Andrews, Sir Leonard Rogers, L. W. Harrison, J. Ramsay Hunt, Robert Hutchinson, Andrew J. Wright, Joseph Priestly, and many other distinguished men both here and abroad. Illustrations are numerous and excellent. The review of the year's work in the treatment of disease is arranged in alphabetical order,

starting with abdominal surgery, acne vulgaris, actinomycosis, and so on throughout the various branches of medicine and surgery, finally concluding with yellow fever.

This book deserves far greater circulation in this country than it has at present and we hope our readers will take the opportunity to subscribe for this excellent annual.

DISLOCATIONS AND JOINT-FRACTURES. By Frederic J. Cotton, M.D., Visiting Surgeon to the Boston City Hospital; Associate in Surgery, Harvard Medical School. Second Edition, Reset. 745 pages with 1,393 illustrations from drawings by the author. Philadelphia and London: W. B. Saunders Company, 1924. Cloth \$10.00 net.

This edition, the second, with 1,400 illustrations from drawings by the author, has been entirely reset and is in fact an entirely new book as it contains the vast experiences of the surgery of the great war and so many other additions since the last issue of two years ago, that we urgently advise all our readers to get a copy of this most excellent work. More intimate knowledge of dislocations and fractures is urgently needed, especially among the younger men. There is less knowledge of this branch of surgery as far as the young graduate is concerned than any other branch of science taught in our universities. We hope that this excellent book will be duly appreciated by the profession.

1923 COLLECTED PAPERS OF THE MAYO CLINIC AND THE MAYO FOUNDATION, Rochester, Minnesota. Octavo of 1,377 pages, 410 illustrations. Philadelphia and London: W. B. Saunders Company, 1924. Cloth, \$13.00 net.

This is the fifteenth volume of the collected papers of the Mayo clinic, and this volume is as usual of the very highest order. In view of the fact that the size of the volume increased each year, amounting to more than twenty hundred pages last year with more than fifty papers omitted, a new plan has been adopted reducing the volume to fourteen hundred and twenty pages.

The present volume is a complete reference record of all papers for the year 1923. Some papers are printed complete, many abridged, some abstracted, and a number mentioned by title only. Many of the articles, heretofore, have been of limited interest to specialists only and have already been published in journals devoted to specialists. It has seemed best to refer to these by abstract or reference only.

When it is considered that the contributors to this volume number nearly one hundred and fifty, it is readily seen that it would be impossible to give even abstracts of all the papers published in this admirable volume. There is only room to state that all the prominent men in the foundation are represented, such as, William J. Mayo, Charles H. Mayo, E. Starr Judd, Henry S. Plummer, A. W. Adson, D. C. Balfour, William W. F.

Braasch, M. S. Henderson, George E. Brown, George E. Eustaman, Verne C. Hunt, H. R. Lyons, W. C. MacCarthy, Frank C. Mann, Russell M. Wilder, Gordon B. New, John D. Pemberton, L. R. Rountree, A. H. Sanford, John H. Stokes, Louis B. Wilson, and many others.

The contents cover, as usual, the surgical work done by the contributors in the alimentary tract, the urogenital organs, the ductless glands, the blood and circulatory organs, the skin and syphilis, the head, trunk and extremities, the brain and spinal cord, the nerves and a number of general miscellaneous papers. While the papers are shorter than heretofore, all the essential facts are pointed out, and the statistics given are of the greatest value.

Not till one looks over a volume like this can one appreciate the extraordinary amount of surgery accomplished at the Mayo clinic. Take, for instance, one subject alone like "Tumors of the Spinal Cord" by A. W. Adson, who states that the records of the Mayo clinic from January, 1910, to October, 1923, show that one hundred and fifty-one patients with a diagnosis of possible tumors of the spinal cord have been explored.

No doubt every progressive surgeon possesses these valuable volumes, and it is not necessary to go into any further details.

NATIONAL HEALTH SERIES. Volumes twelve, thirteen, and fourteen. New York, Funk & Wagnalls.

We have reviewed already eight or more of the preceding publications edited by the National Health Council and published by Funk and Wagnalls Company of New York. There are to be twenty volumes in all, 18 mo., averaging about 70 pages each, \$6.00 for the whole set, or 30c per volume.

These books are written by authorities, and are admirable books for the laity. They have the endorsement of all members interested in the National Health Council containing such bodies as the National Committee for Mental Hygiene, the National Committee for Prevention of Blindness, the American Social Hygiene Association, the American Red Cross and other similar important bodies.

The books before us are on "Tuberculosis; Nature, Treatment, and Prevention," by Linsly R. Williams, M.D., of the National Tuberculosis Association, giving a thorough description of tuberculosis and particularly its prevention.

The next volume is on "The Expectant Mother," by Dr. R. L. Denormandie, M.D., instructor in obstetrics, Harvard Medical School, giving a good synopsis of the care during pregnancy, complications, etc.

The third is by Dr. T. W. Galloway, Professor of Zoology at Beloit College, on "Love and Marriage," chapters on the nature and meaning of courtship, selection of mates, and above all, the secret of successful marriage and how to be educated accordingly.

The last volume is on "Venereal Diseases," by Dr. W. F. Snow, M.D., general director of the American Social Hygiene Association, giving a popular description of the nature of venereal diseases, diagnosis and treatment, of the community safeguards against its spread—all of great practical value and which should be well impressed especially upon the male portion of the population.

PHARMACOLOGY AND THERAPEUTICS, or the Action of Drugs in Health and Disease. By Arthur R. Cushny, M.A., M.D., LL.D., F.R.S., Prof. of Materia Medica and Pharmacology in the University of Edinburgh. Illustrated with 73 engravings. Lea & Febiger, Philadelphia and New York. 1924. Price \$6.00.

The eighth edition of this standard and superexcellent book is before us. Prof. Cushny, formerly Professor of Materia Medica and Pharmacology in the University of Michigan, later in the University of London, now holds the same chair in the University of Edinburgh, his distinguished services having thus been duly recognized. This work is so well known everywhere that it is useless to call attention to its innumerable merits. This last edition has of course been duly revised and many alterations made, noticeably so in the chapters on digitalis, ergot and cocaine. Insulin, vitamins, glandular extracts are duly considered. In short it remains an invaluable book, indispensable to every student and practicing physician. The reader will pardon us if we quote this "conclusion" from the author's preface: "And here I cease to write, but will not cease to wish you live in health, and die in peace; And ye our Physicks rule that friendly read, God grant that Physicke you may never need."

OBSTETRICAL NURSING. A manual for nurses and students and practitioners of medicine by Charles Sumner Bacon, Ph.B., M.D., Professor of Obstetrics in the University of Illinois and the Chicago Polyclinic; Medical Director in the Chicago Lying-In Hospital and Dispensary; attending obstetrician to the University, Chicago Polyclinic. Henrotin, Grand and Evangelical Deaconess Hospitals, Chicago, Ill. Second edition, thoroughly revised. Lea & Febiger, Philadelphia and New York, 1924.

We are certainly blessed with an excellent selection of books on obstetrical nursing. Prof. Bacon's manual now appearing in its second edition has been thoroughly revised, and can be most earnestly recommended to all obstetric nurses, and nurses in general, and also to the medical student and general practitioners. The chapters on the puerperium and care of the infant are rather better than we find in most books on this subject. We recommend this book in every way.

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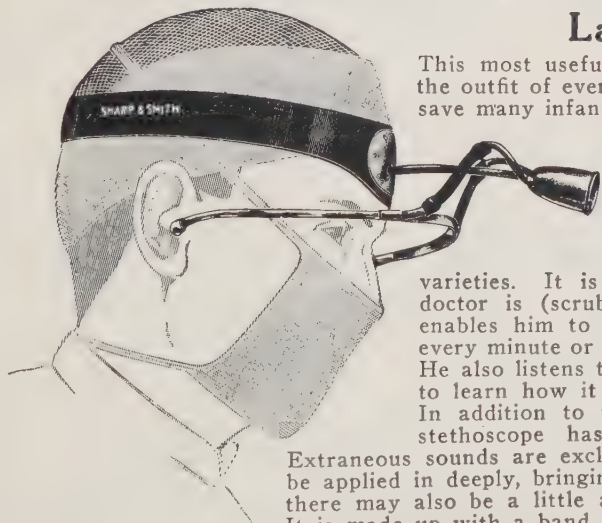
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The Pharmaceutical Industry lost one of its most distinguished figures when Frederick Kimball Stearns, Captain of industry, Patron of the Arts, World traveler and Chairman of the Board of Frederick Stearns & Company, died on Saturday, June 7, at Beverly Hills, California.

Mr. Stearns was born in Buffalo, N. Y., December 6, 1854, and was an infant when his father, Frederick Stearns, moved to Detroit in the following year and established the pharmaceutical business which has grown to world-wide proportions.

His early education was received in the Philo M. Patterson Classical school and in 1873 he entered the University of Michigan, but left in his junior year to become identified with his father's busi-

ness. He began work in the laboratory and was employed in every department there, as well as in all the offices, and it was this experience which gave him such a mastery of the details of the different departments and such a thorough preparation for the position he was afterwards to hold as president of the Company.

Assuming the presidency in 1887, at the age of thirty-three years, he formulated plans for the continued development of the already large business, which to him seemed to be really in its infancy.

The history of the house of Frederick Stearns & Company, from the time F. K. Stearns took up the presidency and with it the management of the business unfolds a drama of one commercial victory after another—the record of widening spheres of activity and increased usefulness to the profession of pharmacy.

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ties; and biologic products; inception was given to a business in perfumes that ranks today among the largest in the country.

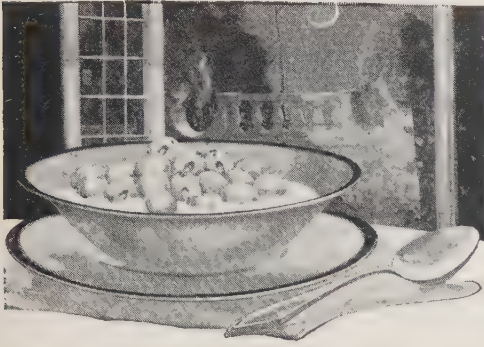
Additions were built to the laboratory until its inadequacy became intolerable, and in 1899 the erection of the extensive establishment now in use was begun. In January, 1900, the present main laboratory on Jefferson Avenue was occupied, and in 1912 the business of Frederick Stearns & Company had grown with such rapidity, that it became necessary to re-incorporate; the capital stock at this time being increased tenfold to \$2,000,000. Further increases in the capital structure of the business were made necessary by the ever expanding characted of the enterprise until today the corporate value is represented in terms of a capitalization of \$4,000,000.

In 1921 F. K. Stearns having witnessed the success of these plans and with characteristic determination to devote the remainder of his life to the pursuits of art and music which lay so close to his heart, delegated the executive control of the business to others and accepted the newly created office of Chairman of the Board of Directors. Until the time of his death Mr. Stearns continued to guide the policies and retained the same eager interest in the business as he did in the days when he was the executive head.

Throughout his active and vigorous life, Mr. Stearns was foremost in developing public spirit and furthering progressive movements in music and art. In fact he was always known as a most generous patron of the fine arts, particularly of music, of which he had a wide knowledge. He traveled very extensively and to good advantage. He was fond of outdoor athletic sports and was a ball player of considerable repute during his college days, having been captain of the varsity "nine." It was on account of his intimate knowledge of the game that he was induced to take the presidency of the Detroit Baseball Club in 1885 and 1887 which under his administration corralled the "Big Four" and made Detroit famous by winning the National League Championship, also the world's championship by the defeat of the St. Louis Browns, American Association Champions. This feat established a new record in baseball history. Mr. Stearns' interest in amateur athletics also placed him in the presidency of the Detroit Athletic Club, for four terms, of which club he was one of the founders, and he was also the vice-president of the American Amateur Athletic Union.

Mr. Stearns was widely known as a traveler, having begun in 1909 the travels which earned for him the title of "The Tramp De Luxe." A believer in the maxim "See America First," he traveled to every part of the United States and made a score of trips to Europe. In fact there were few corners of the globe which he had not visited.

Mr. Stearns' art library was considered the most complete in the state and for many years he served as a trustee of the Detroit Museum of Art. He was an accomplished musician and was the organizer and most liberal supporter of the Detroit Orchestral Association which was formed in



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of half and half—one of the
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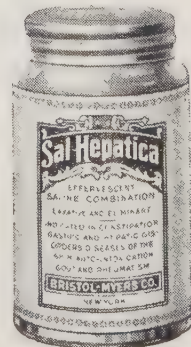


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1905. This organization was designated as the "Backbone of the musical situation in Detroit." Mr. Stearns was president of the society until 1910 and upon his retirement a loving cup was presented to him by his friends and associates in appreciation of his services. The present Detroit Symphony Orchestra is an outgrowth of the Detroit Orchestral Association. Mr. Stearns was also president of the Detroit Musical Society. His musical library was pronounced the best in the city.

Mr. Stearns' philanthropies and charities were many and had been carried out with as little publicity as possible and it is perhaps the children of the poor who will miss him most. Many years ago, his attention was attracted to a pen drawing in a Christmas number of "Life" entitled "Forgotten." The artist had depicted a little girl in a desolate garret in the early dawn of Christmas morning, weeping before a ragged, empty stocking which she, in child-like faith, had hung the evening before in the hope that Santa might remember her. The pathos of the child in the picture so impressed Mr. Stearns that he resolved to form The Empty Stocking Society, with himself as the sole member, and determined that, so long as he lived and was able, no little ones of Detroit should awaken Christmas morning to find an empty stocking. Each year he secured names and addresses from the associated charities and poor commissioners of those families with children which received assistance from the city, and beginning about 1894, Mr. Stearns for many years, or until the organization of such Christmas charitable societies as the Goodfellows' Club, dispensed a charity that was enormous and did it so quietly that not even his closet friends knew of it. For some weeks previous to Christmas a certain part of his factory organization was engaged in the purchasing and sorting of gifts which were to go to needy poor children, the number of whom at times reached as high as five thousand. There were toys, candy and many other articles delivered by the wagons and trucks of the company to destitute children of all nationalities and creeds.

Men associated for years with Mr. Stearns speak of his optimistic nature—his magnetic personality—his ability to brush away trifles and accomplish big things. And beyond that, his desire to help those less fortunate. To struggling youngsters with artistic talents, he never turned a deaf ear. According to one writer he possessed a "genius for business and a passion for music." Another musical biographer assigns to him the distinction of being the man who "made listening a fine art." Dominating and resourceful yet always generous he possessed those fine qualities of character and soul which leave the world poorer for their loss.

At the time of his death Mr. Stearns was a member of Detroit's leading clubs and in addition he was a member of the Alpha Delta Phi fraternity.

He leaves a widow, Mrs. Helen Sweet Stearns, and four children, Mrs. Ralph M. Dyar of Beverly Hills, California; Frederick Sweet Stearns, vice-president of Frederick Stearns & Company; Mrs. Edward W. Hubbard of New York City, and Alan Olcott Stearns of Pasadena, California.

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Man (helping the dear young thing find a book in the public library): "Have you read _____"

Dear Young Thing: "No, just plain old brown ones."

"I've come to fix that old tub in the kitchen."

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A microscopic youth, with a penny clutched firmly in his moist hand, stood on tiptoe in front of a candy counter, inspecting the goods. Nothing seemed to please him and finally the clerk, in exasperation, said:

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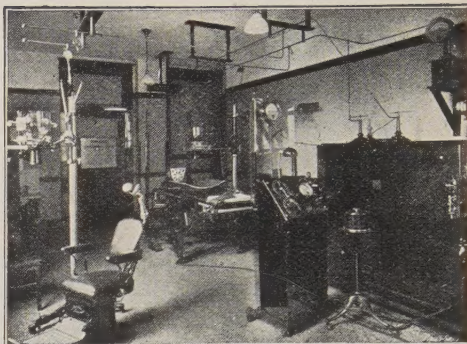
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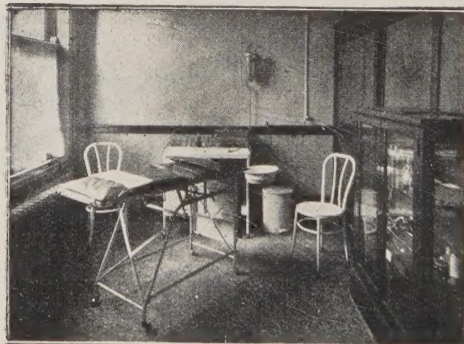
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